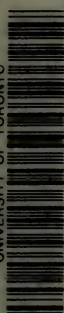


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# INTERNATIONAL COLLABORATION

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## Problems and Opportunities



WORLD  
HEALTH  
ORGANIZATION

ADDICTION  
RESEARCH  
FOUNDATION

Proceedings of a symposium held in Toronto  
on the occasion of the designation by the World  
Health Organization of the Addiction Research  
Foundation as a Collaborating Centre for Research  
and Training on Drug Dependence

TORONTO, CANADA  
1978



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edited by  
Barbara Rutledge  
and  
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ADDICTION RESEARCH FOUNDATION  
TORONTO, CANADA

# ERRATUM

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## **Designation Ceremonies**





# OFFICIAL DESIGNATION

Dr. Héctor Acuña

The formal designation of the Addiction Research Foundation as a World Health Organization Collaborating Centre for Research and Training in Drug Dependence formalizes an existing relationship which has been a close and rewarding one for our organizations for many years. We have long recognized the important leadership role which the Addiction Research Foundation plays, not only in the Americas but worldwide, as a centre of excellence in many areas of interdisciplinary research on alcohol and drug problems, as well as in the training of professionals in health care and related fields. Over the years, WHO and the Pan American Health Organization have benefited from the services provided by professionals from the centre as consultants, temporary advisors, and members of expert committees. Likewise, a number of fellows from our region have studied at the Foundation. Through such activities, the Foundation has already made an important impact on the development of alcohol and drug-dependence research in many countries. However, we believe that the formal designation of the Foundation as a WHO collaborating centre will not only strengthen our relationship, but also expand our capability to understand the problems of alcohol and drug dependence and to plan and implement effective regional and global strategies to combat them.

Several WHO Expert Committees have discussed the complex and multi-factorial nature of alcohol and drug problems and have outlined some of their serious health and socio-economic consequences. These problems

are of major magnitude and their solutions involve intervention far beyond the scope of the traditional medical model. Hence, it has become evident that new initiatives will be needed at the global, regional, and national levels to reduce the social and health costs resulting from alcohol and drug dependence. The 20th World Health Expert Committee on Drug Dependence, recognizing the deficiency of knowledge in this field, stressed the need for research and evaluation of new strategies for its prevention. The committee also urged concerted action in program planning, implementation, and evaluation. In addition, it noted that the worldwide control and prevention of alcohol and drug dependence would require a well-organized strategy and a system for the exchange and coordination of technical information and experience. Since alcohol and drug problems know no national or regional boundaries, the effort will have to be global if it is to be effective.

Insofar as the Region of the Americas is concerned, there is a great disparity in resources available for the field of drug dependence in the more developed countries—such as Canada and the U.S.—and the developing countries which make up most of the population of the region. It is interesting to note, however, that alcohol and drug abuse are estimated to be at least as prevalent in the developing countries as they are in the more developed countries. In particular, alcoholism and related problems such as traffic accidents, loss of economic productivity, and social costs to communities are increasing. Recent resolutions adopted at the XIX Pan American Sanitary Conference in 1974 and by the Directing Council of the Pan American Health Organization at its meetings held in 1971, 1975, and 1977 have stressed the need for expanding the organization's mental health programs, continuing its efforts in promoting epidemiological research on drug abuse, and strengthening its programming, planning, and research on the major health problems affecting youth. The XXIV Directing Council in 1976 emphasized that mental health and drug dependence were areas requiring greater attention within the organization's overall approach to the health and well-being of youth in the region. Therefore, since we consider mental health to be an integral part of sound family health planning and programming, we are constantly seeking new ways to incorporate it into our health activities. This includes the strengthening of those elements aimed at special high-risk groups such as youth. In this way, we are introducing mental health components into our family health programs and traditional family health elements into the area of mental health practice. With this approach, we find that the limited resources of the organization can be more effectively utilized in our day-to-day activities in the various countries.

In response to resolutions of recent World Health Assemblies requesting the Director-General to give major attention to the means by which WHO might contribute to the control of the social and public health problems associated with drug and alcohol abuse, two WHO Working Groups met in 1973 and considered various aspects related to the designation of WHO

Collaborating Centres for Drug Dependence Research and Training. The concept of collaborating centres was seen as a means by which WHO might foster the development of facilities and other resources for acquiring and disseminating new knowledge and for training personnel. The basic strategy underlying WHO's plan to collaborate with centres of excellence, such as the Addiction Research Foundation, takes into account the fact that we do not have sufficient resources to meet the growing needs of the developing countries for policy and program guidance, technical information, and training. Centres such as the Addiction Research Foundation are a source of great knowledge and experience which can be adapted and applied to benefit developed and developing countries.

The collaborating centre is an integral part of the overall concept of technical cooperation among developing countries through which the specialized agencies of the United Nations system are seeking ways to strengthen linkages among developing countries so that they can share capabilities and find joint solutions to common problems. WHO is committed to the concept of technical cooperation among developing countries as a means of promoting national self-reliance in health program development. Traditional technical assistance, which implied a donor/recipient relationship and the dependency of the developing countries on the developed countries, has been found to delay rather than enhance the emergence of local capability. The fundamental impetus for this change of strategy is the need to generate new knowledge relevant to specific needs of the developing countries.

In considering the organization of mental health services in developing countries, a 1974 WHO Expert Committee emphasized that mental health should not be considered in isolation from the wider problems of public health and socio-economic development. Alcohol and drug-related problems take an especially high toll in developing countries, where the measures, policies, and programs transplanted from the more developed countries have failed to provide realistic solutions. It is recognized that these solutions can only be achieved through true technical cooperation among developing countries which means establishing networks of institutions in developing countries and providing their professionals with tools and training relevant to solving their own problems.

It is fitting to express our recognition of Dr. E.M. Jellinek's contribution to this attainment of international collaboration, for it was probably he who did the most toward establishing the first link between the countries of this region, the World Health Organization, and the Addiction Research Foundation.

In officially designating the Addiction Research Foundation as a WHO Collaborating Centre for Research and Training in Drug Dependence, we express the spirit of international solidarity and mutual understanding that will be the basis for success of our future joint endeavors.

# GUEST SPEAKER FOR CANADA

The Honorable Keith Davey

Canada has always been a humane and outward-looking nation. Our priorities in the fields of health and social welfare both at the federal and provincial levels have reflected our concern with developing a healthy nation in which the individual is assured of adequate support from society. Through the various bodies of the United Nations and through our system of international aid we have sought to bring about a humane approach to the solution of problems in the developing parts of the world, including those in the field of public health.

Canada's contacts with the World Health Organization go back to the 1940s when Canada was one of the founding members of WHO. Indeed the first director-general of WHO was a Canadian, Dr. Brock Chisholm, who had been the deputy minister in the Department of National Health and Welfare of Canada. I would also like to pay tribute to the other Canadians who have worked with the international health organizations over the years. They are part of the Canadian tradition of service to the health of the world carried on by the many medical missionaries sent out from Canada in past years. This tradition continues into the present, both in national bilateral programs and in international programs, such as those of the WHO and the Pan American Health Organization.

The designation of the Addiction Research Foundation as a collaborating centre of WHO enables us to point out that this is the latest in a number of various WHO centres of expertise in Canada, all of which we regard as a



signal honor given in recognition of the Canadian contribution in these special fields. Such centres provide an opportunity, within Canada, for Canadians to serve the cause of health throughout the world. The particular centre we are dedicating today is the only one of its kind in this field in Canada, and it will be collaborating also with similar centres in other countries working in research and training in drug dependence.

Among those who have worked for many years in the field of drug dependency, the Addiction Research Foundation has a well-deserved reputation on the international scene already, and has been working with WHO since 1952. Its staff has served as experts, advisers, and consultants on many occasions. It has pioneered in many areas of biomedical, behavioral, and programmatic research as well as policy analysis. There are few such centres of excellence in the world. In this context, it is fitting, I think, that the Foundation should be one of the first designated for the purpose of dealing with alcohol and drug dependency.

Moreover, the approach being followed by the Foundation is consistent with what we strive to do as Canadians. The emphasis will be on supporting WHO both through research and by providing training for people from developing countries, to equip them to deal with their own problems. In other words, using what we have learned, we will be helping the Third World countries to solve their own problems—a most positive approach.

As is so often the case, the establishment and recognition of a centre like this is a tribute not only to an institution, but also to one person. David Archibald, who is executive vice-chairman of the Foundation, has devoted his efforts over many years to assisting in the international community. Not only has he acted as an advisor to WHO itself, but he has been a consultant in developing countries, notably Thailand. This designation ceremony is a fitting culmination to Mr. Archibald's efforts over many years.

At this point, I should like to indicate the concern of the Canadian government with the problem of drug dependency on the international scene and the action it has taken. These efforts are supportive and consistent with the approach being taken by the Foundation. Canada, is, as you know, a member of the United Nations Commission on Narcotic Drugs. The Commission is the body responsible for administration of the international treaties dealing with narcotics and other psychotropics. Since 1971, Canada has been a voluntary contributor to the United Nations Fund for Drug Abuse Control. Over the six-year period, we have contributed a total of \$1.2 million to the fund. This makes Canada the second-largest contributor, after the United States.

The fund has been used for a variety of purposes, including measures to control the flow of drugs throughout the world and to assist countries in the Third World in the development of means of prevention and treatment. Among the projects that have been supported are those concerned with assisting developing countries in establishing the size and characteristics of

the drug abuse problem so that a rational response to them may be developed. Currently, Canada is collaborating with the U.N. in the development of resource material on what are called "measures to reduce demand." This rather technical term is used to cover all those forms of education, prevention, and treatment that are currently being used and conceivably can be applied in other countries. Action leading to such transfers of technology will be an important part of the work of this WHO centre.

Other agencies and units in the United Nations have their work funded by this U.N. fund in areas such as education against drug abuse, crop replacement, law enforcement, and control of the illicit traffic. The assistance provided by this fund, however, is only seed money, both in the international organizations and in the countries to which direct aid is given. For example, in the case of crop replacement, only pilot projects are being carried out in the countries where the illicit production of the opium poppy occurs. After crop replacement has been shown to be successful, it is then hoped that countries concerned will use their own resources to continue and enlarge the project. In particular, they are expected to ask for help from international assistance programs and bilateral aid agencies in combating this problem at the source. As an aside, may I suggest to developing countries where there is a problem with illicit poppy growing, that, if they give high enough priority to this effort, their governments could make a request through the Canadian embassy to the Canadian International Development Agency for bilateral assistance to extend the work of the U.N. Fund for Drug Abuse Control pilot project in your country. These are rural development projects which fall well within the mandate of our aid agency, and I am sure such appeals will get very sympathetic consideration.

There are many problems we share in common, but there are also many differences, particularly cultural differences in the selection of lifestyle. From a sociological point of view, this is one of the most interesting and difficult facets of the problem of lifestyles which involve substance abuse. They all depend on certain common physiological responses of the human body, more or less common to all people, and yet differ so greatly from culture to culture, raising particular problems where cultures with different habits come in contact with each other or are changing rapidly. We have had tragic experience of these intercultural differences in our own country; for example, the different responses of the original inhabitants of this country to "firewater," as they called alcohol, and that of the immigrants from Europe who brought this use of alcohol with them as part of their cultural baggage. The hope is that through these international exchanges we will all learn from one another, and that each of us will find suitable solutions to *our* problems.



# GUEST SPEAKER FOR ONTARIO

The Honorable Dennis R. Timbrell

In view of the Addiction Research Foundation's long and outstanding record in a field of urgent and practical need, it seems particularly appropriate that its designation as a collaborating centre of the World Health Organization represents not only a symbolic honor, but the beginning of a new working relationship. This designation is not only a tribute to the Foundation's past accomplishments. It is also a rare opportunity to contribute in the future to the knowledge and well-being of nations around the globe. Before I comment any further, I feel obliged to inject a slightly personal note. I have been minister of health for less than a year, and so, while I bear a responsibility for the Foundation as an agency of my ministry, I claim no credit for the achievements that have brought this honor to the Foundation. With that disclaimer on record, I have no hesitation in voicing some proud feelings about the Foundation, on behalf of the people of Ontario. Everyone in this province who is aware of the Foundation and its work — and I am sure they must number in the millions — cannot help but appreciate the initiative and vision demonstrated by David Archibald and his early colleagues when they founded the organization 28 years ago. While we commonly reserve the term "pioneer" for the early settlers of this country, I think it's fair to describe the founders of the Addiction Research Foundation as *modern* pioneers. Certainly, they were the creators of the first organization of this kind in Canada. Indeed, at that time there was only one other comparable research organization in all of North America.

The Foundation had not been operating for long before it began establishing valuable associations with researchers and other medical

authorities in various parts of the world. Through these international ties, the Foundation demonstrated its eagerness to share its growing fund of knowledge with all who could make good use of it—and to receive, in return, the benefit of knowledge gathered elsewhere. Over the years, the Foundation has acquired an international reputation for excellence in such endeavors as research into public health problems related to alcohol; the training of professionals to care for alcohol-dependent and drug-dependent people; and, quite recently, its research into a new form of treatment for victims of cirrhosis of the liver.

The Foundation's reputation has attracted an almost steady stream of visitors from many parts of the world—from such places as India, Hong Kong, Latin America, the Soviet Union, and the United States. Some visitors come for a few days as observers. Others stay a full year, as participants in the formal course of training. And every one of them carries back, to his or her own country, some of the knowledge and insight needed to conquer the complex and difficult problems of addiction.

For people everywhere, these problems, paradoxically, have one characteristic that is both a source of dismay and a source of encouragement. No nationality or race can claim immunity to the ravages of alcohol or drugs. All of us, regardless of where we live on this earth, or what color our skin may be, are potential victims. Yet the universality of this problem is also a source of strength and unity to all those who are dedicated to finding solutions. Everything they learn is of potential benefit, not just to the people of one nation or race, but to all mankind.

For any research centre to disseminate its findings widely and effectively, there must be a vehicle. In designating the Addiction Research Foundation as a collaborating centre, WHO is providing an unusual vehicle of great promise and potential. In making use of this vehicle, the Foundation can be expected to help significantly in overcoming the current imbalance between the developed nations and the developing countries in their command of resources, knowledge, and experience in this vital field of research.

While I speak proudly of the contribution that the Foundation can make to the rest of the world, I do not intend to imply for a moment that the flow of information is to be all in one direction. As citizens of a well-developed nation, we have been fortunate in being able to afford the cost of acquiring the technology and the highly skilled professionals needed to conduct research that may lie beyond the economic reach of less-affluent nations. Yet there is much we can learn from developing nations about their methods and experiences in various fields of medicine. At a time when we in Ontario are obliged to restrain the spending of public money, there is a great deal the less-affluent nations can teach us about economies in the provision of health care. There are countries, for instance, which have long generations of experience in the use of paraprofessionals—a practice with advantages we in Canada have hardly begun to explore. And no doubt there

are, in other parts of the world, funds of knowledge—about treatments, medicines, and preventives—that we could, and should, acquire for the benefit of Canadians. Much of this knowledge may lie outside the field of addiction research. But, to me, it is almost self-evident that a good rapport between the members of one health discipline can readily lead to useful exchanges of information between those who work in other fields as well.

Our special pride in the Addiction Research Foundation is mixed with feelings of gratitude and goodwill toward WHO for bestowing this honor upon an agency of the Province of Ontario. I speak for the premier, the government, and the people of this province, in extending hearty congratulations to both organizations, with every good wish for success in the promising new partnership.

# GUEST SPEAKER FOR THE ADDICTION RESEARCH FOUNDATION

H. David Archibald

To suggest that I, and my colleagues, are not proud of today's honor would be tampering with the truth. We are proud—very proud. We are aware that the highest international authority in the field of health, the World Health Organization, does not enter lightly into formal collaboration with organizations external to the U.N. system. We realize this and we are honored.

We also realize that the WHO designation carries with it a great responsibility, a great challenge, and a great opportunity to help and in so doing, to learn. We view our work in the international sphere as a two-way street in which we have the opportunity to gain in perspective and knowledge at least as much as we give.

Since its inception in 1949, the Addiction Research Foundation has maintained a strong international linkage. It was realized early that the Foundation had much to learn from experience in other countries and from international agencies such as the World Health Organization and the International Council on Alcohol and Addictions. Conversely, as the Foundation's program developed it became clear that our experience in Canada could contribute significantly to the developing world knowledge in this field.

I was particularly pleased to hear Dr. Acuña's reference to the late Dr. E.M. Jellinek. In various ways, Dr. Jellinek has had a profound impact on this Foundation. When I was invited to develop this organization in 1949, Dr.



Jellinek was my first consultant. Together we worked out the kind of approach and organization that should be developed. The Foundation's direct linkage with the World Health Organization began when Dr. Jellinek joined WHO in Geneva on a full-time basis. Shortly thereafter, we found ourselves serving on various committees of WHO and also, receiving for training a number of individuals from various countries who were provided with WHO Fellowships.

When Dr. Jellinek returned from WHO, he accepted our invitation to come to the Foundation and for two years was a great inspiration and a great teacher. These activities over the years, have provided a strong base, both for contributing knowledge and for benefiting from the experience derived from developments and programs throughout the world.

We understand that the Foundation's designation as a Collaborating Centre means in essence a partnership—a partnership committed to working together in the interests of all people who suffer health and social damage as a consequence of the abuse of alcohol and other drugs.

In such an enterprise, it is important to identify what each partner has to offer—what reserves of knowledge and experience can be placed in the common pool? Use of this pool of knowledge will rely heavily on the vast, well-known experience of the World Health Organization in assisting nations throughout the world to tackle a wide range of health problems. Today, it is appropriate that our WHO colleagues will be concentrating on the potential of our partnership with WHO.

I think it is also appropriate, however, for me to reflect briefly on some of the substance that we at the Addiction Research Foundation may have to offer.

First of all, from a philosophical point of view, we bring a certain amount of humbleness. Those of you who have heard me speak about the Addiction Research Foundation in various forums may suggest—perhaps appropriately—that I am the last person in the organization to use the word “humble” in talking about the Foundation. It is a little bit like asking Henry Ford to give an *objective* presentation on the contributions or lack of some of the automobile to contemporary transportation. However, I use the word “humble” to indicate that we have had enough experience to realize fully that simple, definitive solutions to the problems of alcohol and drugs in contemporary society are simply not available—nor are they likely to be in the foreseeable future. We recognize now that the alcohol and drug problem involves much more than the simple scenario—man takes drug—problem develops—therefore remove the drug—Q.E.D. I believe that the public health communicable disease model provides at least a conceptual framework to enable us to view the wide range of policies and programs that are important for a comprehensive approach to the field. This model, as many of you know, involves (a) the agent—in this case some drug filling the role that in some other illnesses is played by bacteria or viruses (b) the host—the individual persons in whom the use and abuse of a particular chemical

involves a dependence and (c) the environment—the social, economic, legal, and cultural situation in which the first two factors are interacting.

While the agent, host, and environment concept describes the targets for our efforts, the methods of reaching these targets need to be spelled out somewhat differently. A comprehensive program directed toward the reduction and prevention of alcohol and drug problems requires four inter-related approaches.

1. Legislation
2. Research
3. Education
4. Treatment and Rehabilitation for the alcohol or drug dependent person.

Legislation by itself is not an effective answer to the problem, nor is education by itself, nor is treatment and rehabilitation. While none of these approaches will suffice separately, their combined application seems promising.

This broad conceptual framework has served as the basis for the development of the programs and staff resources at the Foundation. Over the past 28 years, we have developed an experienced staff, representing a wide range of disciplines—various clinical professions, educators, career scientists (basic and applied), and specialists in community development. Several of our staff have had considerable international experience.

In general, we see that our broad task is to develop knowledge through research, study the application of knowledge in clinical and community settings, transmit the knowledge through public education and professional training, and determine the kinds of public policy options that may be relevant, important, and feasible.

Let me provide a few specific examples of activities and programs that are relevant internationally.

1. We have developed a line of research that has demonstrated clearly the direct relationship between per capita consumption of alcohol and casualties due to the effects of drinking. This was done in collaboration with our colleagues in Finland and with the European Regional Office of the World Health Organization. Now our scientists are paying special attention to the role of alcohol control policies and the effects of these policies on per capita consumption levels. This work has demonstrated that:
  - a. per capita consumption in a population is a valid indicator of the prevalence of alcohol-related health problems;
  - b. alcohol beverages behave like other commodities on the market, so that consumption is affected by their price level and the disposable income in a population.

These findings have major implications in the development and



application of social policy to stabilize the number of casualties (and the consequent health costs). And, they may apply to the consumption of other drugs as well—both licit and illicit.

2. Foundation research in the development of a specific treatment for alcohol-induced liver disease has significant implications. Our findings suggest very strongly that drugs used in the treatment of hyperthyroidism may also have a specific value in treating alcoholic hepatitis which is now considered to be the lesion that progresses to cirrhosis.

It now seems that this kind of treatment may cut the average cirrhosis patient's hospital stay by at least 50%. In addition to the enormous human value, the application of these research findings will also result in substantial financial savings in the health budget of countries, particularly those with high rates of alcohol-related diseases. When one considers that in some countries, up to 40% of the total health budgets are spent on alcohol-related illness, the potential savings become self evident.

Research of this type lends itself to rapid international application. In considering the value of international collaboration, it is crucial to realize that information dealing with the interaction between drugs and body organs is infinitely more easy to exchange with other countries because it is quite independent of the major social, psychological, legal, or economic factors peculiar to a particular country or society.

3. Since 1968, the Foundation has been monitoring alcohol and drug use trends among young people in high schools in Ontario. We have now developed sophisticated research instruments for this purpose. A recent agreement with the World Health Organization has expanded the Foundation's work in this area to a number of countries. It is hoped that this will facilitate the comparability of data collection in drug use surveys of young people. Also, in the same general field of epidemiology, we are collaborating with WHO in a study of alcohol-related disabilities.
4. Foundation training activities are directed towards professionals, workers, and students in the health care and related fields. We maintain formal and informal affiliations with universities and other training institutions. Our Clinical Institute, for example, is formally affiliated as a teaching hospital with the University of Toronto.

Special programs are also arranged for persons from other parts of Canada and the world. When we receive students for training from other countries, we have found invariably, that they teach us as well. We have learned a great deal from our international guests.

The above are just a few examples of the Foundation's present activities, all of which have direct bearing on the search for and application of practical solutions to alcohol and drug-related health and social problems.

I firmly believe that in most developing countries in the world, and in the developed countries, the chief objective should be to apply what is

already known to the particular needs and circumstances of a community or nation. Based on my experience while working with WHO in Thailand and on other WHO activities, I have no doubt that there is a great need for a well-organized international system for the exchange of information and experience; an exchange that I refer to as an international training system.

It is our sincere hope at the Addiction Research Foundation that we can make a major contribution to this kind of development.

I believe that the time has come when great strides can be made in the development and application of practical solutions to this age-old problem. We have no illusions about the difficulties—and the challenges. Speedy and increasingly frequent international travel has converted certain seemingly national health problems into international health problems, giving rise to a great need for increased international collaboration in the search for methods to prevent and relieve human suffering. The problem of alcohol and drug dependence is one specific example.

The opportunity to learn how information may be transferred and *adapted* to different social, economic, and cultural realities is an exciting prospect. We look forward with anticipation to a mutually beneficial collaboration in our work with the World Health Organization, with other collaborating centres, and with other members of the international community.

# POLICY AND PROGRAM OF WHO IN MENTAL HEALTH AND DRUG DEPENDENCE

Dr. Norman Sartorius

I would like to say a few words about the World Health Organization's views on a problem that perhaps is not so very exciting—coordination. The word smells of bureaucracy, of unclear divisions of responsibility, of excuses for past failures, and of fat piles of paper blocking the view of the real world. Also, it can hardly be turned into a moving or even mildly amusing talk. But, I have elected to speak about it because I believe that coordination is essential to the success of programs dealing with mental health and psychosocial problems, including those related to alcohol and drug abuse. There are at least four reasons for this contention.

First, current programs designed to deal with alcohol and drug dependence problems are remarkably ineffective, expensive, and inefficient in many countries. There seems to be a direct proportionate relationship between the success, or lack of it, of such programs, and the extent to which effective coordination between sectors—social sectors—has been established. This is, I don't think, surprising. The skill to assess the importance of the various etiological factors and the potential to do something about the prevention and control of alcohol and drug-related problems lies in so many sectors and disciplines, and it is very unlikely that isolated approaches can be effective.

Second, the current trend of increase of expenditure for health is unlikely to continue for the simple reason that no country can afford it. That means that the ruthless elimination of duplicated effort and the pooling of

resources are likely to be necessary even if unpleasant and very unpopular.

Third, though much knowledge exists, inter-sectoral boundaries often prevent its effective application.

And fourth, our ignorance about a number of fundamental issues is still of such magnificent proportions that a broadly based multi-disciplinary and multi-sectoral approach with an adequate information support still has a better chance of producing knowledge necessary for effective management, much more so than a uni-disciplinary effort.

For WHO in general, a problem is worthy of effort if it is serious in terms of health and social consequences, if there is something that can be done about it, if whoever has to deal with the problem can afford politically and economically to do something about it, and if the population in question requests or accepts the intervention which is proposed.

Drug and alcohol-related problems and mental health problems in general satisfy these criteria. The economic, individual, and social losses caused by these are enormous. There are methods that could be applied to alleviate the problems, and they could be of a price that countries can afford. In many countries there is also a political will to attack the problems, and the populations request or accept measures. Lacking are mechanisms that will bring about the match between the right problems and the right solutions.

The problem of alcohol and drug dependence always reminds me of Piet Hein's definition of what a problem worthy of attack is. He said a problem worthy of attack is always proving its worth by hitting back. And I think that alcohol and drug dependence, according to this criterion, certainly are very worthy of attack.

Coordination, defined as a matchmaker, is basically of three kinds. It can be between sectors and disciplines within a country, between countries within and across disciplines, and with U.N. or other international and governmental and non-governmental agencies. It is, however, easier to recognize the need for coordination than to achieve it. First, there are traditional gaps between different sectors of social service. They are explicable in historical terms which does not make them any more meaningful or less harmful. Second, there are gaps for personal reasons such as the personality clash of two chiefs in different sectors who should work together but cannot stand the sight of each other. Third, there are administrative and legal reasons. They range from different planning cycles in different agencies to different budgetary and supervisory arrangements. Not least in this group of difficulties preventing joint planning and implementation of activities by different agencies are obsolete and useless rules. Fourth, there is often considerable reluctance toward collaboration because it might involve delegation or redistribution of responsibilities between different professions or institutions. Fifth, there is the difficulty of finding out who will be the partner in a coordinated effort. For example, if a set of community health measures is planned, it may on occasion be difficult



to decide just who this community is, who represents it, and at what time and for which purpose, because representatives and leaders of the community vary from task to task and from one time to another. Sixth, there are different levels of collaboration and coordination and it is often necessary and very often forgotten to examine where coordination will be useful and where it will be a bureaucratic slogan obstructing progress. And then to decide which level of collaboration will be acceptable, possible and useful to most people. In some instances, merely an exchange of information may be sufficient. In other instances, a reorganization of the manner and content of work of different agencies may be needed. Seventh and last, coordination itself may be difficult and time-consuming and collaboration which starts with enthusiasm and goodwill usually wears itself out. All of these difficulties can be overcome provided there is a core of people interested in doing so, and a mechanism that will help them.

Some three years ago the World Health Assembly, the supreme decision-making body of WHO, made up of ministers of health and other top-level decision-makers from some 150 countries, requested the director-general to develop a strong mental health program in cooperation with countries feeling that—I quote from the resolution—“irreversible damage to health and social productivity of nations will occur.” We were faced with the task of finding ways to coordinate and develop a new mental health program as a matter of priority. A series of consultations with countries ensued, together with a review of the nature of the problem and available solutions. As a result, three major objectives were defined for a new program.

The first objective was to prevent and to reduce psychiatric, neurological, and psycho-social problems including those related to alcohol and drug dependence. Some 300 million people in the world today suffer from such problems and only a minute proportion of them receive adequate care. Furthermore, prevention of the likely growth of the problem deserves priority attention.

The second objective was to increase effectiveness of general health services through appropriate utilization of mental health skills and knowledge. This objective deals with the growing dehumanization of medicine and the over-reliance on technology. It appears that our professions are somehow the last ones left that are not suffering from that ill.

The third objective was to develop strategies for intervention based on an increased awareness of mental health aspects of social action and change. Here the tremendous changes in developing countries, in their psychological impact, are at the centre of attention.

The achievement of these objectives will require a reorientation of thinking about mental health and about the role of mental health professionals. Collaboration with and between different social sectors such as education, social welfare, labor, and health, and cooperation among countries in various organizations which can play a role in mental health programs is essential.

Reorientation of mental health programs means more than a mere incorporation of existing programs in other human services. It means that professionals must assume new roles, concentrate on working with and through others, and change their manner of thinking about priorities in the field of health. The change of their role will require a different approach to their training, a different legislation for their functioning, and a different philosophy underlying their action.

The new mental health program, which includes also a concern about drug and alcohol dependence, has been designed to facilitate some of these developments and to achieve the above objectives in cooperation with countries. I should say that the funds WHO has are enormous, limitless almost. The Secretariat's funds, however, are very, very limited. Any action that is contemplated or undertaken has to be done through and with countries.

At present, the mental health program has some 90 projects designed to deal with mental disorders, neurological disorders, conditions such as alcoholism, drug dependence, projects dealing with problems of uprooting and changes in family structure. It involves a variety of disciplines including psychiatry, neurology, sociology, psychology, psychopharmacology, and genetics, and it draws very heavily on the expertise available in other programs of the organization, such as service management in country health programming.

It was devised in cooperation with countries, and its implementation depends on joint work with many governments, institutions, and experts in all countries of the world. At the basis of the program there is, however, a need to develop a more efficient way of coordinating work and a variety of mechanisms has been developed to achieve it. Time does not permit the description of all of those. Instead, I will concentrate on three which are most likely to be relevant here—the inter-agency consultative committees, the mental health coordinating groups, and the network of collaborating centres.

The inter-agency committees are not a new mechanism and for many years WHO has participated in these. These committees involve other U.N. agencies and deal with a variety of topics such as rehabilitation, mental retardation, drug dependence. They in this way complement, on a decision-making level, the practical working arrangements developed with bodies such as the United Nations Division for Narcotic Drugs, and the U.N. Fund for Drug Abuse Control. Much more work, I think, will need to be done to make maximum use of this collaboration which is of particular importance because of the necessary liaison between drug demand and supply control activities on a worldwide scale.

The second mechanism is the coordinating groups at country, regional, and global levels. This concept was developed afresh in the mental health program and basically ensures that plans at the country level are being produced not chiefly by mental health professionals any more but by groups which involve mental health professionals, usually as a minority, as well as

representatives of other social and human services sectors. At a regional level, representatives from different countries will decide about priorities for action and thus collaborate with WHO regional offices in New Delhi, Alexandria, Copenhagen, Brasaville, Manila, and, of course, in Washington.

The regional advisors for mental health then meet with headquarters staff, with the representatives of other international non-governmental and governmental organizations, and with experts representing different disciplines to decide on the shape of a global program.

In all of these groups, the basic principle and the basic difference from other groups and expert committees in the past is that they are composed of individuals or representatives of organizations who have to do the work. The groups' recommendations are therefore agreements about who will do which task, rather than vague lamentations.

The second bi-annual meeting of the global group, who discussed the mental-health program until 1983, took place in Manila in 1977. In most regions of WHO it proved possible to organize regional groups' meetings in the intervening years. And national coordinating groups have been established in a large number of countries. These groups usually report to ministers of health, or in some instances to the prime minister. Sometimes groups deal primarily with drug dependence, as in Iran, Indonesia, and Thailand. In other instances, the groups have wide terms of reference which include the whole field of mental health. There is a wide variety of these groups and a wide variety of mechanisms which are used. Sometimes they are linked to a collaborating centre such as the mental health research and training centre in Chandigarh, India. In other countries, particularly developed countries, other mechanisms have to be searched for and various stratagems used to overcome what is, I think, a very strong opposition sometimes to bring together the different forces that could achieve, if working jointly, improvements in the management of the problem.

In addition to these groups which are more or less permanent bodies, there are other activities which complement their work. Very important is the newly-formed African Mental Health Action Group. Five African countries have decided to work together to cope with the tremendous psycho-social problems of uprooting, disruption of families, and other side-effects of rapid development. These countries are all in the south of Africa, where, in addition to all the other problems, there is also the problem of a mighty neighbor and racist policies that have caused countries such as Botswana and others to become severely threatened in terms of psycho-social problems.

Another activity which is also new is a series of workshops of top-level decision-makers who discuss drug dependence problems. The first two workshops will bring together top level decision-makers from 22 Asian countries. It is hoped that other similar workshops will take place in Africa and in Latin America. These groups will agree basically on specific measures—legislative, health, and social—which are necessary in their countries to deal with drug dependence.



Finally, a third mechanism is the network of collaborating centres which is potentially a very powerful mechanism for coordinated work. Such centres are being established in different parts of the world, usually in existing institutions and involving core groups of people willing and able to collaborate in the program. In some instances they deal with a group of problems, for example with drug dependence and alcohol-related problems. There are two such centres at the moment. In other instances, the field of action of a centre is the whole mental health and psycho-social area. As a rule, the centres are engaged in three forms of activity. Within countries they serve as a rallying point for WHO-linking activities defined by the World Health Assembly programs. Within their region, there are points of technical support and cooperation with the regional office. And on a global level, they serve as active repositories of skills and methods for use in national and international programs. In performing these three types of activities, they serve as a convenor or a platform for inter-sectoral and multi-disciplinary workshops and consultations, at which collaborative programs are planned, agreed upon, and evaluated. They are taking an active part in research identified as a priority on the basis of country needs or through regional coordinating groups. They provide facilities for training in new methods of service provision. They collaborate in a development of a common language and information system. And above all, they serve as the channel of active communication and the link to a worldwide pool of knowledge and cooperation.

These are very tall orders and it is only because of the exceptional competence, motivation, and humanitarian concerns of people who are in the centres that they are in a position to respond to these challenges. WHO's effort cannot succeed without close collaboration with countries and the many individuals and groups who share the organization's concern for the health of the world today and tomorrow. Health is a basic human right. It is an essential component of a life of quality and a necessary ingredient of human happiness and progress. I think we should be happy to be alive at a time when the achievement of this human right has become a possibility, and when we can make our contribution to attaining it.



**Epidemiology of Alcohol  
and Other Drug-Related Problems**



# INTERNATIONAL STRATEGIES FOR EPIDEMIOLOGICAL RESEARCH

by Dr. Reginald G. Smart

Epidemiological research in any country carries many problems. It is time-consuming and often frustrating to arrange for large-scale case-finding or trend studies. The clear identification of high-risk populations and the best methods of treating or preventing problems can be a life-long pursuit. Given these difficulties why would anyone bother with international epidemiology? Any local difficulties will be compounded when research is attempted in several countries at the same time. Probably because of these difficulties and the lack of solutions to them, international studies in the alcohol and drug field have been few and sometimes disappointing. We would not wish lightly to encourage or rudely to dispel these feelings of disappointment. It is useful to examine the justification for international studies which have recently been completed and the best strategies for such research.

In general, observations in this area are few and essentially tentative since there have not been many international studies concerned with alcohol and drug use. In fact, we are in the position of having to judge a beauty contest where there are not enough contestants. It could be claimed that, to date, not enough experience has been gained to be able to state principles or to evaluate strategies. It is essential to examine carefully the approaches which have been taken and to be open-minded about strategies which may or may not show promise. This review of international research is confined essentially to the alcohol and drug field and to large-scale studies of

“nations” or “countries.” It is not concerned with studies of individual tribes or ethnic groups which are frequently associated with a single country.

### **Aims and Importance of International Studies**

If international studies are few, the question arises whether their rarity occurs because they are uninteresting and uninformative. Could it be argued that only national or local studies are really important in the alcohol and drug field? For the most part, national and local governments fund the majority of research in these fields. They also support the treatment, educational, and preventive programs which are likely to have an impact on the incidence and prevalence of addictions. It could be argued that what is really relevant to these activities is research data of a local and national sort, which gives solutions uniquely adapted to each country. It is an open question whether local and state programs could be much affected by the findings of international studies. Presumably, they might even delay the development of unique national solutions.

Of course, an entirely different point of view could be presented. It could be argued that with drugs other than alcohol, international control mechanisms do exist. International treaties concerning narcotics have existed for some time and a treaty concerning psychoactives has recently been adopted by some countries. These treaties require a set of local and national controls on all aspects of availability. International research could be important in dictating both the form and working details of such treaties and in clarifying how future treaties should be structured. Theoretically, it should be possible to determine means of controlling drug availability which are effective for a variety of countries.

Of course, international control of alcoholic beverage use is at a very early stage. There is nothing similar for alcohol, even on the far horizon, to the Single Convention on Narcotic Drugs. There have been suggestions that alcohol be brought under some international control. Such controls are beginning in the European Common Market countries where agreements are being discussed on the legal blood alcohol level in driving, the beverages which can be sold, and their alcoholic content. However, apart from such policies as allowing the sale of duty-free alcohol at airports, major agreements on controlling availability internationally are apparently not being arranged. Certainly, it is predictable that, with increasing travel and the development of trading unions, international alcohol controls will become essential. An important role for international studies would then be to provide the rationale and framework for establishing such controls and examining their effectiveness.

As well as assisting the development of international control mechanisms, international studies could be important in (1) developing similar epidemiological principles for explaining alcohol and drug use, and (2) developing and testing similar measuring instruments. A variety of studies

has shown that per capita alcohol consumption and problems such as liver cirrhosis are correlated in different countries (see Bruun et al., 1975). Studies have also shown that alcohol use in various countries describes a log normal distribution as indicated by Ledermann. The formation of principles which explain the nature and extent of alcohol and drug problems in many countries would be of great interest. Confidence in the value of the findings in any given country or small set of countries is greater if they could be replicated in many countries.

International studies also enable one to generalize research results. For example, if it is established for a few countries that where per capita alcohol consumption is high, problems are more frequent, this would not have to be established for all 176 countries in the world. It could be taken as sufficiently well established if substantiated in a variety of countries of different types. Preventive or educational programs based upon that assumption could begin directly and without the need for 175 replications of the original findings.

Devereux et al. (1962) have also stated that "the opportunities (for cross national studies) lie in the chance such comparisons provide for shaking hypotheses free from particular sets of cultural arrangements and for catching strategic variables in new ranges and combinations." This "shaking-free" aspect allows us to have more confidence about our findings and their importance when we can see their confirmation under diverse conditions and within different cultures.

A further purpose for epidemiological studies is to develop methods of measurement which have similar validity and reliability in all countries. Probably valuable research has been delayed by the lack of such measurement devices. The situation is somewhat better with regard to alcohol than drugs. For any country, per capita alcohol consumption is seen as an important and often obtainable index, although problems exist in countries with unrecorded alcohol consumption. However, in the area of drug use comparable indices do not seem to be available. Data such as drug arrests, numbers of treated addicts, and drug overdoses will vary from one country to another more because of local variations in enforcement levels, hospital beds, and treatment facilities than because of differences in the prevalence of drug problems. International studies then can valuably assist in the development and testing of cross-nationally valid measuring instruments, e.g. indices of alcohol and drug problems, questionnaires, observational techniques, and clinical methods.

It has been suggested that "a primary goal of transcultural psychiatry is the search for constancy and of cross-cultural anthropology, diversity" (Phillips and Draguns, 1969). Similar purposes can be associated with epidemiological studies of alcohol and drug use. The psychiatric tradition in cross-cultural research is a long one, going back at least to Kraepelin's studies in 1904 (quoted in Phillips and Draguns, 1969). Generally, it involves an effort to see whether similar sets of symptoms, e.g. of depression, schizophrenia, etc. can be found in patients in a variety of countries. For the



most part, interest has not been in the cross-national incidence of such patterns but in what the patterns indicate of cultural diversity and national character. Studies of alcoholics in various countries could examine the existence and patterning of various symptoms such as blackouts, morning drinking, and loss of control.

An approach based on cross-cultural anthropology would tend to emphasize the differences among countries in their drinking and drug use problems and how they are related to unique cultural and social norms. The basic assumption is that social pathology such as psychiatric problems and drug abuse reflect the cultural setting (Hallowell, 1959; Caudill, 1962).

### **International Strategies as Applied in Current Research**

It is useful to examine the way in which certain large scale cross-national studies of alcohol and drugs have been developed in keeping with the purposes outlined. The aim here is not to be exhaustive but to consider what more ambitious and recent studies indicate about the strengths and weaknesses of different strategies. In general, it is possible to categorize these studies as official statistics, informant studies, and special surveys.

#### **Official Statistics**

Only one large scale cross-national study using official statistics seems to be available. Sulkunen (1976) has reported data from the World Alcohol Project (WAP) which attempted to examine trends in alcohol consumption over a 20-year period. This study relied on data about apparent alcohol consumption found in reports of the Dutch Distillers organization, the UN Statistical Yearbook, various FAO Reports, The Growth of World Industry, and World Trade Annual Reports from the United Nations, and a special survey. These sources cover production, foreign trade, and consumption of alcoholic beverages.

Sulkunen has carefully pointed out the difficulties with this approach, such as "the exact reporting of alcohol content, the inconsistent classification of beverages, the deficient registration on a national level of the amount of alcohol used in the production of distilled liquors," etc. Because of these difficulties, data on changes in alcohol consumption from about 1950 to 1970 were obtainable from only 32 countries out of the 176 or so which could have provided data. As Sulkunen reports, official statistical systems for alcoholic beverages are adequate only from "developed capitalist countries and from many socialist countries."

The distribution of the countries throughout the world is also of interest. Almost all of those included are within Europe or Scandinavia. Only Peru represents South and Central America. There are no countries from Africa except South Africa and none at all from Asia, the South Pacific region, or



the Indian subcontinent. In short, the method is currently able to deal only with a limited range of countries in the world, chiefly those in Europe and North America. Understanding epidemiological principles governing drug use in other types of countries will require either the development of better reporting systems or entirely different methods of approach.<sup>2</sup>

Parenthetically, it might be noted that studies of official statistics for drug consumption other than alcohol would also be difficult to accomplish. Statistics on such drug use are not reported for many of the same countries as were left out of Sulkunen's report.

## **Informant Studies**

Several efforts have been made to utilize informants from different countries. This is a method often used by cultural anthropologists to study primitive peoples and to supplement direct observations. In the study of alcohol and drug use, it has typically not been used as supplementary but has been combined with survey techniques.

The largest study of this type was begun by Jellinek during the late 1950s and was known as the International Survey of Drinking Customs (ISDC). This study was never completed by Jellinek but Popham (1976) has provided a most instructive report on the project. Unfortunately, the project must be seen as an interesting effort which failed to achieve most of its original objectives. Reports of failures in this area are rare and they are valuable for what they indicate about the best strategies to employ.

Originally the ISDC was to include as many as 19 countries although this was later scaled down to 16 and then to eight. Eventually data was obtained from five countries—Belgium, Finland, France, the Netherlands, and Yugoslavia but Popham found that only data from the first three could be used in the final report.

What is of greatest current interest in the ISDC is the method employed. Jellinek decided upon the informant method because he believed that it was more valid than self-reports about drinking. A large number of informants were to be used in each country. They were to be carefully chosen to be representative of the whole country but in some countries this was not achieved, e.g. in France some temperance workers were chosen. The aim, however, was to select persons from broad occupational groupings in each ethnographically distinct area. In Finland there were 12 areas and five occupational groups for a total of 60. Each informant was to choose four other persons from his local area who were knowledgeable about his social group. Informants were expected to meet and fill out an extensive questionnaire (66 items) about drinking habits in their occupational group—not about their personal habits or those of the country as a whole.

It can be seen that this is probably a relatively inexpensive but time-

2. This section ought not to be construed as criticism of the content or conclusions from the WAP but only as an effort to point out its limitations.

consuming method. In the original study, principal informants were paid but not the others. However, the time involved in travel, preparation of materials, and data analysis would be considerable for even one country. As stated earlier, useful data were obtained from only three countries. It is interesting to speculate about why this project was unsuccessful (according to the original plan). Apparently, the various collaborators did not meet and there was no joint discussion of planning or data collection. Commitment of individual investigators to the project was probably low from the outset. Also there are no indications that joint collaboration on data analysis or reporting was planned. Another important problem was that Jellinek and one of the other collaborators died before the plans were completed. It is unfortunate that such an interesting and promising method had only one trial and not an ideal one at that.

Two other studies using informants in a different mode have been reported (Moser, 1974; Ball, 1977). In both, informants were used to describe the extent of, and problems in, treatment for them in their own country but not to gather new data or observations. These studies were essentially concerned with incidence and prevalence and not with epidemiological principles or details. In a sense they are intelligence-gathering rather than being empirically or theoretically-oriented.

The study by Moser (1974) of problems and programs of drug dependency in 33 countries used informants' official records, studies conducted earlier, and the observations of informants. Although interesting data and observations are presented in this study, many of the selected countries could not produce data on various aspects. For example, only two countries produced figures on the number of cannabis users. Only nine had data on increases in annual alcohol consumption, with increases across a variety of years.

The study by Ball et al. (1977) used a similar format to the Moser study. The purpose was to "obtain up-to-date information from the major drug-consuming and drug-producing nations on the extent of drug abuse and the availability of treatment." He invited a leading drug abuse authority in each of 25 countries to answer questions about, (1) the numbers of drug abusers in the general population and in treatment, (2) the major drugs of abuse, and (3) the types of and numbers in treatment. All but one of the informants replied. However, the reports varied in the amount of detail the informants provided. No data on opiate addicts in the general population were given for 10 countries, and no data on numbers in treatment for five countries.

It is clear from Moser's and Ball's studies that the use of informants in information gathering gives uneven results. Highly developed countries have the largest amount of data on alcohol and drug problems as they would on most social phenomena. The varying definitions employed in identifying drug users and abusers in different countries make strict comparability among them difficult to achieve.

## **Special Surveys and Cooperative Studies**

The studies discussed so far involve indirect data-gathering techniques. An important category of cross-national work involves the development of special data collections from the actual users—by means of surveys, observations, and the like. Duijker and Frijda (1960) refer to four types of studies which fall into this category. The “repetitive-successive” type occurs when studies from one country are repeated in another. A “repetitive-concurrent” type occurs when one researcher develops a study to be done in other countries at the same time. An international group could develop a study to be carried out at different times or at the same time in the members’ own countries. Most studies in the alcohol and drug field are of the “repetitive-successive” type. In fact, Manaster and Havighurst (1972) have noted that the most popular cross-national study is one where an investigator from one country merely repeats his own study in a different (usually literate) country, and with no clear rationale for doing so.

Repetitive-successive studies in the alcohol and drug area have been common and perhaps a few examples are sufficient. For example, Smart and his collaborators (Smart and Whitehead, 1973; Castro et al., 1977) repeated studies of the distribution of drug use which originated in Canada, Britain, and Mexico. Bruun et al. (1975) have summarized studies of the distribution of alcohol use in a variety of countries with the first being done in France and Canada. Most repetitive-successive studies are not mere replications since the design often undergoes subtle changes when moved from one country to another. For example, the methods of measuring consumption and the types of populations used in the various countries may differ.

Joint-development-concurrent studies have not been common in the field until recently. However, several are currently underway, financed and cooperatively managed by the World Health Organization. It has been stated (Manaster and Havighurst, 1972) that these are “the newest and most rare, the most involved and we believe, most promising type of cross-national research.” It is difficult to quarrel with this statement. Such studies attempt to surmount the main difficulties with all other types of effort—non-comparability and irrelevancy to one or more of the countries involved. It is only when joint planning around certain clear objectives is begun that such problems can be overcome. The main difficulties of such studies are, of course, their high cost and large time involvement for all concerned.

The only large-scale published study on the joint-development-concurrent model seems to be one by Moore (1976). This study began with a joint planning workshop attended by officials from 14 countries. They were to investigate the areas of incidence, prevalence, and characteristics of drug users, public and official attitudes, and social mechanisms for intervention. The decisions taken tended to emphasize flexibility at the expense of comparability. A “shopping list” of subject areas was developed for investigation depending on local conditions. In the final report only three countries appeared to have produced empirical data, but there was no comparability in the studies undertaken. For example, Puerto Rico reported



epidemiological studies of drug addicts; Mexico, studies of persons (14 years of age and over); and Italy, drug use among students in a cultural association. This effort involved essentially a set of "country" studies with no cross-national data or methodology.

Within the joint-development-concurrent framework several studies are underway under the auspices of WHO but I am closely in touch with only two. One is concerned with the development of comparable instruments for drug use surveys among young people and the other, with "Community Responses to Alcohol-Related Problems." Both studies are in the early stages and only some of the difficulties can be foreseen. However, it is useful to draw on this experience and to review recent literature for indications about the strengths and weaknesses of these cross-national strategies. Both studies involve joint planning sessions with all the participants deciding upon the general strategy, instruments, and timing of the study. Visits of collaborators and WHO staff to the individual sites seem to be important factors in generating commitment to the studies, ensuring comparability in design, foreseeing problems and their solutions, and in keeping the study on track. Despite the difficulties of these studies, I am impressed with the possibilities for cross-national research and the generally high level of commitment which it can generate.

My own experience in collaborating in these epidemiological studies have given me some insight into how difficult they are to organize. For example, considerable problems arise in developing even comparable demographic items to describe the sample and to cross-tabulate against drug use. In some Asian countries it was impossible to ask students about their parents' education as they simply did not know it. In fact, it was very difficult to reach any cross-national agreement on the elements defining social class; for example, members from Asian countries felt that income, education, and occupation did not reflect social status. In some African countries even age is poorly reported on surveys as births are not registered and parents often falsify the ages of their children in order to get them into school. We found in Mexico that the concept of urbanization had no meaning and that people could not be asked whether they lived in a city or town or on a farm. In Mexico, too, we had to ask about the socio-economic status of the mother since so many families had no father. It is difficult in many Latin American countries to specify who "lives" in a particular house since there is so much coming and going of extended family members and friends. Marital status as known in North America, also creates problems since short-term partnerships are very common in Latin America.

With regard to other arrangements for international studies, we also experienced difficulties with the following:

1. Translation of questionnaires frequently presented problems and translators do not always agree with each other. In some countries serious delays occurred because so many translations were required,

e.g. multi-racial countries such as Malaysia required as many as four translations;

2. Sampling is very difficult for many developing countries which did not have a regular census. Having to resort to a special census or aerial mapping is difficult and time consuming.
3. There are many problems with using school populations in developing countries. Many do not have large proportions of young people in school and school systems in different countries have very different school years.
4. It is difficult to interview some women in Latin America because they naturally deferred to their husbands. Many said "I will have to ask my husband—only he knows."
5. Many things taken to be routinely available in developed countries and necessary for epidemiological work simply do not routinely exist in many developing countries. Some of these would include: people experienced in large-scale survey work, trained interviewers, high speed computers and/or people to access and program them, and people with experience in survey sampling and data analysis. In some places access to libraries with current materials and journals is limited as is even regular access to photocopy machines. All of these difficulties are generally not found at the same time in any one developing country. It does mean, however, that studies in many such countries will be labor and not cost-intensive and will take much longer to complete. Such studies must often be seen as developmental rather than as research, i.e. one must accept that skills and expertise will develop as the study proceeds rather than assuming that they exist at the outset.

All of these difficulties can be overcome through careful management and planning of the type recommended by Manaster and Havighurst (1972). This requires at least a central group for planning, management, and communication, highly committed centres in each country, and the opportunity for face-to-face discussions about the research whether through regular meetings or through a traveling coordinator.

## **Conclusions**

In general, the following conclusions seem justified:

1. Studies of official records for epidemiological purposes are likely to be limited to a few developed or socialist countries and to generate data mostly about incidence and prevalence rather than broader principles.
2. The use of official informants will produce data or estimates from a variety of developed and developing countries. However, only limited aims can be achieved because of the rarity of data except for incidence and prevalence.
3. The use of Jellinek's non-official informant method seems extremely promising. The method appears to be relatively inexpensive and within

the capability of most countries, given some central planning and help with data collection and analysis.

4. Joint-development-concurrent studies are certainly quite likely to have long-term payoff in cross-national research. Although few have been completed in the alcohol and drug area, at least they involve in-depth research which is relevant both within and across countries, striving for cross-national comparisons.
5. Some tolerance toward circumstances in developing countries will be required if we wish to involve them in epidemiological studies. Frequently, the availability of hardware and software resources for research either does not exist or is unpredictable. We should attempt to include such developing countries if we wish to "shake-free" our hypotheses from particular local or cultural arrangements—especially those of the highly developed countries. We are interested in how our findings apply to all sorts and conditions of men.

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# EPIDEMIOLOGICAL RESEARCH IN THE CARIBBEAN CONTEXT

by Dr. Michael H. Beaubrun

Little has been written in the Commonwealth Caribbean about alcohol consumption and alcohol-related damage other than dependence. A few studies have appeared about hospital admissions for alcoholism in Trinidad and Tobago<sup>(1,2)</sup> and the Bahamas<sup>(3,4)</sup> and one paper has been published from a field study of drinking practices in Jamaica.<sup>(5)</sup> Apart from one pioneering study by Golding<sup>(6)</sup> in 1973 there has been nothing written about alcohol and road traffic accidents.

In 1974 The World Federation for Mental Health and The International Council on Alcohol and Addictions collaborated with the Bahamian government in holding an international conference on the prevention of addictions in developing countries.<sup>(7)</sup>

That meeting brought together workers from many parts of the Caribbean and focused attention on the extent of alcohol-related problems and the need for good basic data on which preventive programs might be built. It helped to give birth to the Caribbean Institute on Alcoholism in St. Thomas and persuaded the Sixth Caricom Health Ministers Meeting in 1975 to endorse its use as a centre for training workers in alcoholism for the region. The Caribbean Institute has held three summer programs and has operated to date mainly as a training institute, but it seeks also to stimulate research, to collect meaningful comparative data for the region, and to develop culturally appropriate programs for treatment and prevention. This paper presents some data about alcohol consumption in Trinidad and

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Tobago, the price of rum relative to per capita income, and road traffic accidents.

Additional data suggesting an unusually high prevalence of alcohol problems in East Indians is linked with the observation that more East Indians seem to be involved in traffic accidents.

## **Background Data**

The two islands of Trinidad and Tobago form one country at the south eastern end of the Caribbean Archipelago near the coast of Venezuela. The population at mid-year 1976 was 1,098,600: 43% African; 40% East Indian; 14% mixed; and 3% made up of White, Chinese, Syrian-Lebanese, and a few others. Trinidad produces oil and natural gas, and since 1973 there has been an exponential growth in the Gross Domestic Product as soaring world oil prices have turned the economy from a relatively poor agricultural one to a prosperous and rapidly industrializing one. Financial reserves are over three billion U.S. dollars and growing rapidly. The 1976-77 budget was a billion U.S. dollars (TT\$2.4 billion) to which a supplementary appropriation of TT\$300 million was added.

TABLE I

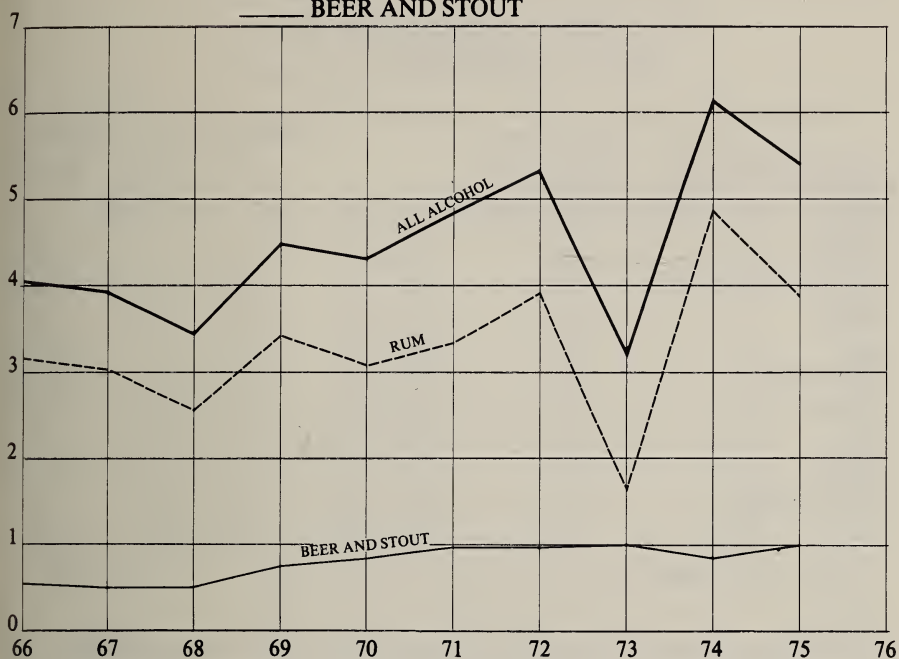
PER CAPITA CONSUMPTION BY TOTAL POPULATION  
LITERS ABSOLUTE ALCOHOL  
1966-1975

YEAR	BEER & STOUT	WINE	RUM	WHISKEY	GIN	TOTAL
1966	.524	.115	3.14	.258	.023	4.06
1967	.505	.121	3.03	.234	.025	3.92
1968	.505	.123	2.54	.203	.025	3.40
1969	.722	.130	3.40	.205	.026	4.48
1970	.866	.133	3.07	.205	.027	4.30
1971	.961	.141	3.33	.331	.038	4.80
1972	.965	.137	3.95	.186	.106	5.34
1973	1.049	.125	1.70	.236	.072	3.18
1974	0.885	.144	4.86	.274	.046	6.21
1975	0.999	.156	3.88	.395	.049	5.48

Figures for consumption have been obtained from production and imports, minus exports. Table 1 shows the consumption in liters of absolute alcohol per capita for the period 1966-1975, broken down for the major categories of alcoholic beverage. Trinidad and Tobago is clearly very much a spirit-consuming country with 75% of all its alcohol being consumed as rum but there has been a gradual tendency for beer and stout to gain a greater share of the market, amounting in 1975 to 18%. Wine is almost negligible, less than 3%, and gin even less. Whiskey has been gaining ground lately with increasing affluence but in 1975 was still only 7% of the market. There is a hidden consumption of whiskey because of smuggling from Venezuela and bottles brought in duty free by travellers, but the amount consumed is probably still less than 8% of consumption.

**FIGURE ONE**

— ALL ALCOHOLIC BEVERAGES  
 - - - RUM  
 — BEER AND STOUT



**TABLE IA**


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TOTAL PER CAPITA CONSUMPTION SPIRIT COUNTRIES (liters abs alc)		
	1968-70	1975-6
Cuba	1.8	
Cyprus	3.2	
Finland	4.4	
German Dem. Rep.	6.0	
Iceland	2.8	
Israel	2.1	
Netherlands	5.3	
Norway	3.5	
Peru	2.6	
Poland	5.5	
South Africa	3.0	
Sweden	5.8	
Trinidad and Tobago	4.1	5.9
Turkey	0.4	
Yugoslavia	7.8	

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Source: Alcohol Control Policies  
Finnish Foundation for Alcohol Studies

Table 1A compares the per capita consumption with that of other countries which are mainly spirit drinkers.<sup>(8)</sup> The average per capita consumption in litres of absolute alcohol for the years 1968-1970 was 4.1 for Trinidad and Tobago, greater than eight of the 14 other countries listed and nearly equal to Finland. For 1975 to 1976 the figure for Trinidad and Tobago had risen to an average of 5.9.



TABLE 2

PER CAPITA CONSUMPTION OF RUM  
BY TOTAL POPULATION  
1966-1975

YEAR	Total Con- sumption Rum	Population	Per Capita Consumption	Absolute Alcohol	
	Proof Imp. Gals.		Proof Imp. Gals.	Imp. Gals.	Liters
1966	1,457,000	994,850	1.46	.83	3.14
1967	1,437,000	1,010,100	1.42	.80	3.03
1968	1,211,000	1,020,550	1.18	.67	2.54
1969	1,627,000	1,027,800	1.58	.90	3.40
1970	1,469,000	1,026,750	1.43	.81	3.07
1971	1,601,000	1,032,500	1.55	.88	3.33
1972	1,910,000	1,045,100	1.82	1.04	3.95
1973	839,000	1,057,750	.79	.45	1.70
1974	2,394,000	1,066,950	2.24	1.28	4.86
1975	1,939,000	1,081,526	1.79	1.02	3.88

This table shows the computation of the annual rum consumption in liters of absolute alcohol per capita. The slight decrease in population in 1970 will be referred to later.

**TABLE 3**

AVERAGE RETAIL PRICE OF ALCOHOLIC BEVERAGES  
TRINIDAD & TOBAGO 1960-1975 TT\$ PER BOTTLE

YEAR	RUM	BEER	STOUT
1960	2.10	.29	.30
1966	2.46	.30	.34
1967	2.46	.37	.34
1968	3.05	.43	.40
1969	3.06	.44	.40
1970	3.05	.46	.43
1971	3.04	.49	.46
1972	3.04	.51	.51
1973	3.90	.58	.56
1974	4.21	.65	.64
1975	4.77	.69	.73

The retail price per bottle of 26 oz. of rum and per 12 oz. bottle of beer and stout is shown. There were significant rum price increases between 1967 and 1968 and between 1972 and 1973. This was due to a big alcohol tax increase in the budgets presented at the end of 1967 and 1972. In January 1968, excise on alcohol went from TT\$9.66 to TT\$12.00 per proof gallon (imperial) and purchase tax on rum from 5% to 10%. In January 1973, purchase tax went from 10% to 20%. There was also a fairly heavy price increase in 1974 due to manufacturers' expenses.

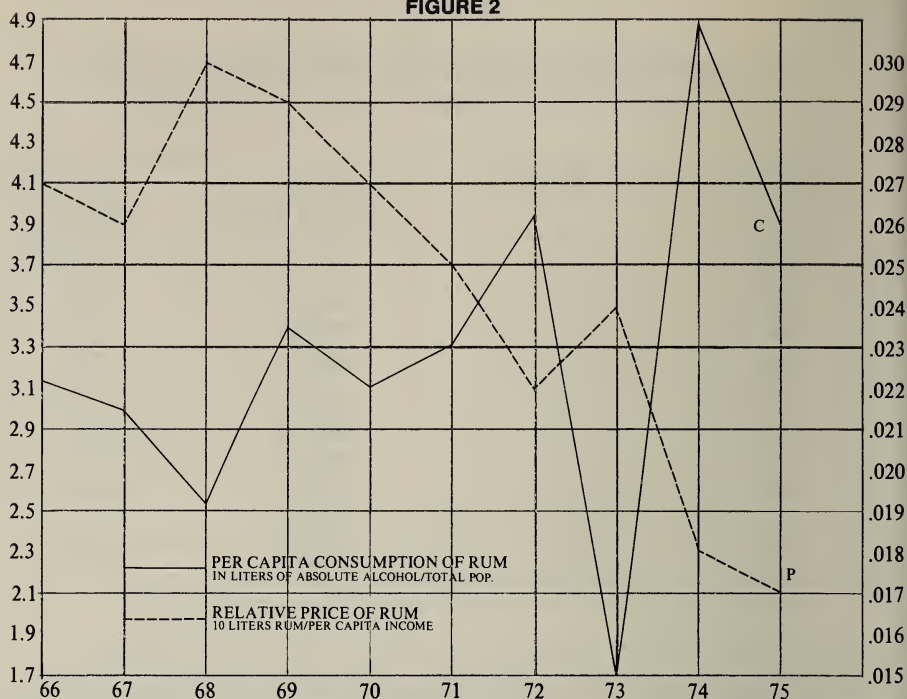
TABLE 4

THE RELATIVE PRICE OF RUM 1966-1975  
TT\$

	Per Capita Income	Retail Price of 10 liter Rum	Relative Price
1966	1190.	32.50	027
1967	1260.	32.63	026
1968	1330.	40.29	030
1969	1400.	40.42	029
1970	1470.1	40.29	027
1971	1629.3	40.16	025
1972	1832.3	40.16	022
1973	2154.7	51.52	024
1974	3145.6	55.61	018
1975	3766.2	63.01	017
1976	4517.6		

Because rum is the cheapest form of alcohol obtainable and widely drunk we have chosen to calculate the relative price of rum rather than all alcohol in an attempt to use the method of the Addiction Research Foundation.<sup>(9)</sup> To obtain a meaningful measuring rod, per capita income was used rather than personal disposable income only because it was easier to get an accurate figure for it. The figures obtained were plotted against per capita consumption of rum in Figure 2.

FIGURE 2



Though these graphs are not exact mirror images there is a fair inverse correlation. The sharp price increases in 1967-1968 and 1972-1973 are reflected by rises in the price curve and sharp falls in the consumption curve. The apparent anomaly of a fall in consumption between 1969 and 1970 when the price was also falling may be explainable with reference to the socio-political scene. 1969 was the year when Black Power became a social and political bandwagon which ended in 1970 in an abortive army revolt which shook the country. A curfew was imposed and all bars were closed for two months. No one could go out in the evening so the rum may have remained on the shelves even though the relative price was falling. There was also massive migration at this point, resulting in the temporary population decrease we saw in Table 2. The price increase at the end of 1974 accounts for the break in the sharp decline of the price graph at that point. It was not enough to reverse the direction because by 1974/1975 the steep rise in per capita income more than outweighed it. Nevertheless, consumption seemed to fall sharply. Again this was a year of marches, strikes, and protests. There was labor unrest in the two largest sugar and oil unions. The Oilfields Workers' Trade Union began protest action in 1974 and went on strike in 1975. These social changes may have affected the consumption curve but we must remember that we are dealing with an indirect measure of consumption which may be subject to minor errors. It is likely that increased consumption of smuggled whiskey may play a part and the true consumption is higher than it is shown to be in 1975.

## Alcohol-Related Problems

To relate these figures to alcohol-related problems we have chosen to look at road traffic accidents not only because they are a matter of pressing local concern but because we have better records of them than of alcohol-related health problems. The data for cirrhosis of the liver, pancreatitis, peptic ulcers, and other alcohol-related health damage will be looked at in future studies but deficiencies in our pathology services and poor recording of causes of death, especially in rural areas, make these figures less reliable.

**TABLE 5**

ROAD TRAFFIC ACCIDENTS 1966-1975  
TRINIDAD & TOBAGO POP. (1976) 1,098,600

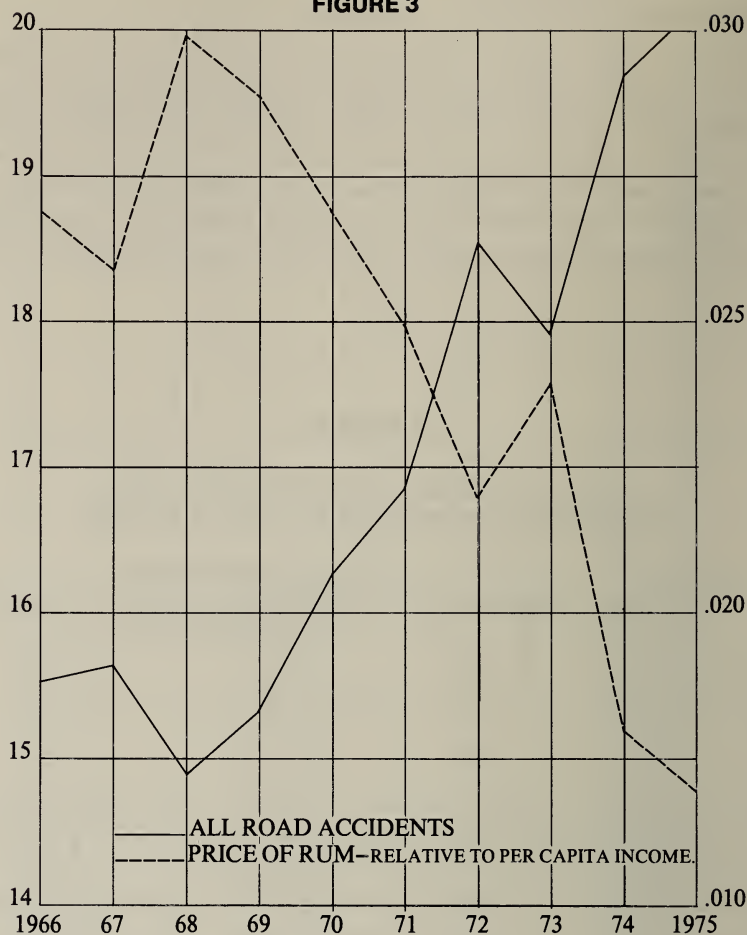
	FATAL	NON-FATAL	NO INJURY	ALL ACCIDENTS
1966	129	3,233	12,320	15,553
1967	131	3,296	12,356	15,652
1968	130	3,161	11,750	14,911
1969	174	3,476	11,864	15,340
1970	171	3,647	12,615	16,262
1971	175	3,621	13,273	16,894
1972	194	3,785	14,756	18,541
1973	202	3,813	14,113	17,926
1974	196	3,939	15,747	19,686
1975	174	3,880	16,097	20,151
1976	214	3,936	17,554	21,704

## Road Traffic Accidents

There were 21,704 road traffic accidents in Trinidad and Tobago in 1976. <sup>(10)</sup> The high incidence of traffic accidents and fatalities has been a cause of much public concern in recent years but there has been a reluctance to impute this to alcohol even though there is an obvious seasonal variation, the heaviest accident and death rate being in December. The author has raised the matter in Parliament <sup>(11)</sup> and in the press but to date the only figures available have been from other countries. We propose to carry out blood alcohol surveys of accident victims, but meanwhile we have unearthed a remarkable correlation between the relative price of rum and total road accidents.

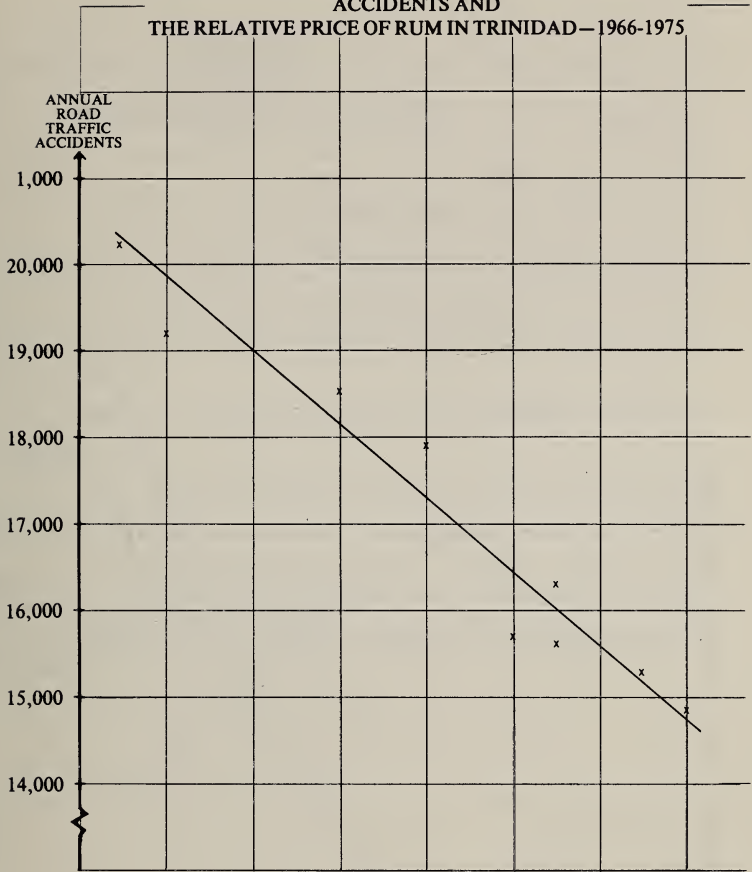


FIGURE 3

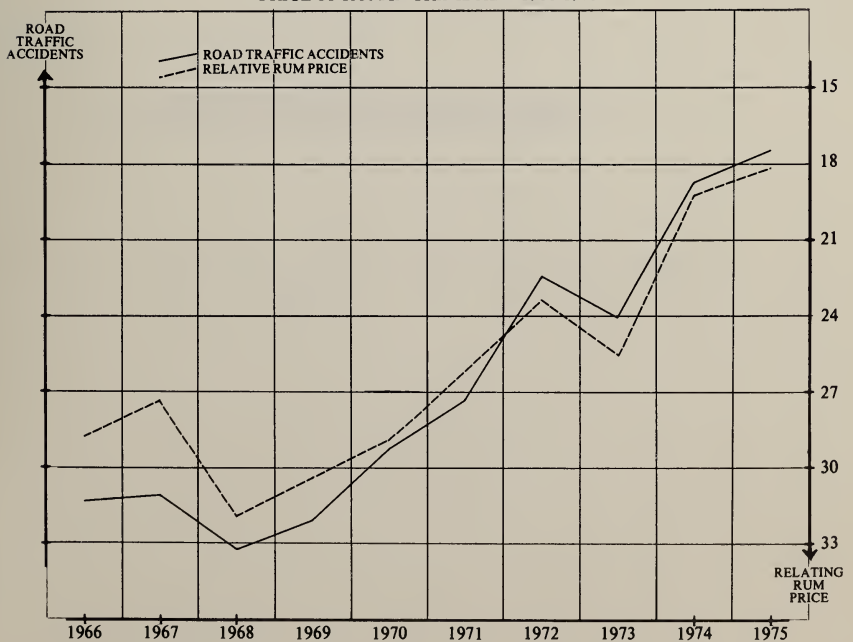


The near perfect inverse correlation between the figures for the relative price of rum and all road accidents is remarkable. These figures all derive from reports of the Central Statistical Office<sup>(12)</sup> yet little or no mention is made in their reports of alcohol as a cause of accidents. The *Annual Statistical Digest* lists under the heading “Illness or Incapacitation by Drink or Drugs” an average of 13 or 14 cases per annum. Under the heading “Negligent, Careless, Improper Driving or Riding, Errors of Judgment” are listed an average of 12,225 cases per annum! Clearly there is a need here for a Breathalyzer even if only for the sake of accuracy in diagnosing the cause of accidents. More important still might be the need for adequate alcohol taxation to keep prices in line with the inflationary rise in the purchasing power of Trinidadians.

**FIGURE 3a**  
**CORRELATION BETWEEN THE ANNUAL ROAD TRAFFIC**  
**ACCIDENTS AND**  
**THE RELATIVE PRICE OF RUM IN TRINIDAD—1966-1975**

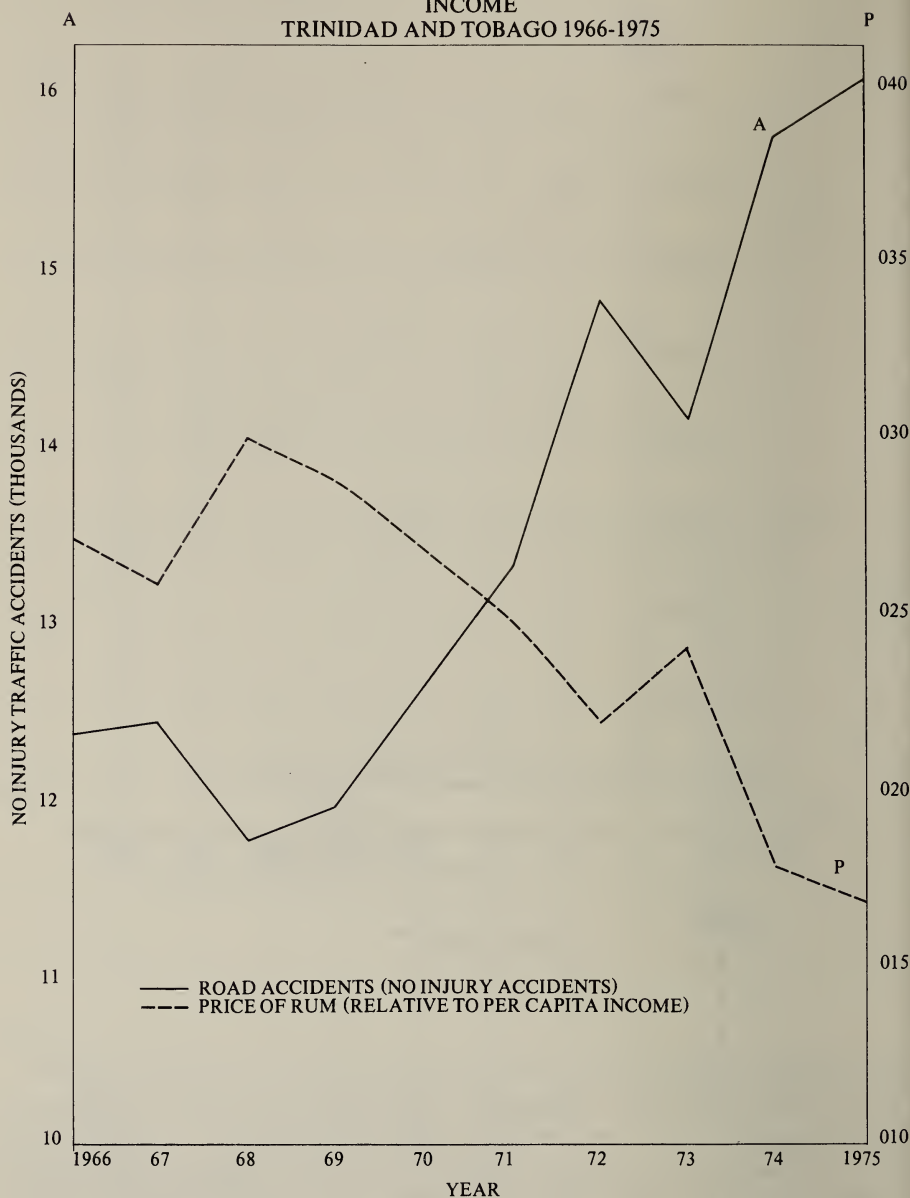


**FIGURE 3b**  
**RELATIONSHIP BETWEEN ANNUAL ROAD TRAFFIC ACCIDENTS**  
**AND THE RELATIVE**  
**PRICE OF RUM IN TRINIDAD—1966-1975**



**FIGURE 4**  
ROAD TRAFFIC ACCIDENTS AND THE PRICE OF RUM RELATIVE TO  
INCOME

TRINIDAD AND TOBAGO 1966-1975



Non-injury accidents heavily outnumber fatal and injury accidents. It is the non-injury accidents that give the closest correlation with price. Correlations with the numbers killed and injured are more commonly published but as numbers are smaller the correlations are less significant. Schmidt and Popham<sup>(13)</sup> reported that there was no apparent correlation between countries in the ratio of consumption and traffic accidents and Schmidt and Smart<sup>(14)</sup> report "a wide variation among the states of the U.S.A. in rates of motor vehicle accidents reported to have involved drinking." Such a variation is probably more dependent on inaccurate reports due to differences in reporting practices and observer bias. If we took such figures seriously in Trinidad we would be greatly misled. The reason for the consistency of our reports is:

1. that we are dealing with the same country and therefore the same reporting practices; and
2. that with very minor accidents where no police charge is anticipated, almost 100% self-reporting takes place in accordance with the law.

The extraordinarily close relationship ( $r = -0.978$ ) between road accidents and the relative price of rum suggests that the latter may be a better indicator of true consumption than the figures obtained from production and imports minus exports.

**FIGURE 5**  
MOTOR VEHICLES LICENCED AND REGISTERED 1966-1975  
AND ROAD TRAFFIC ACCIDENTS

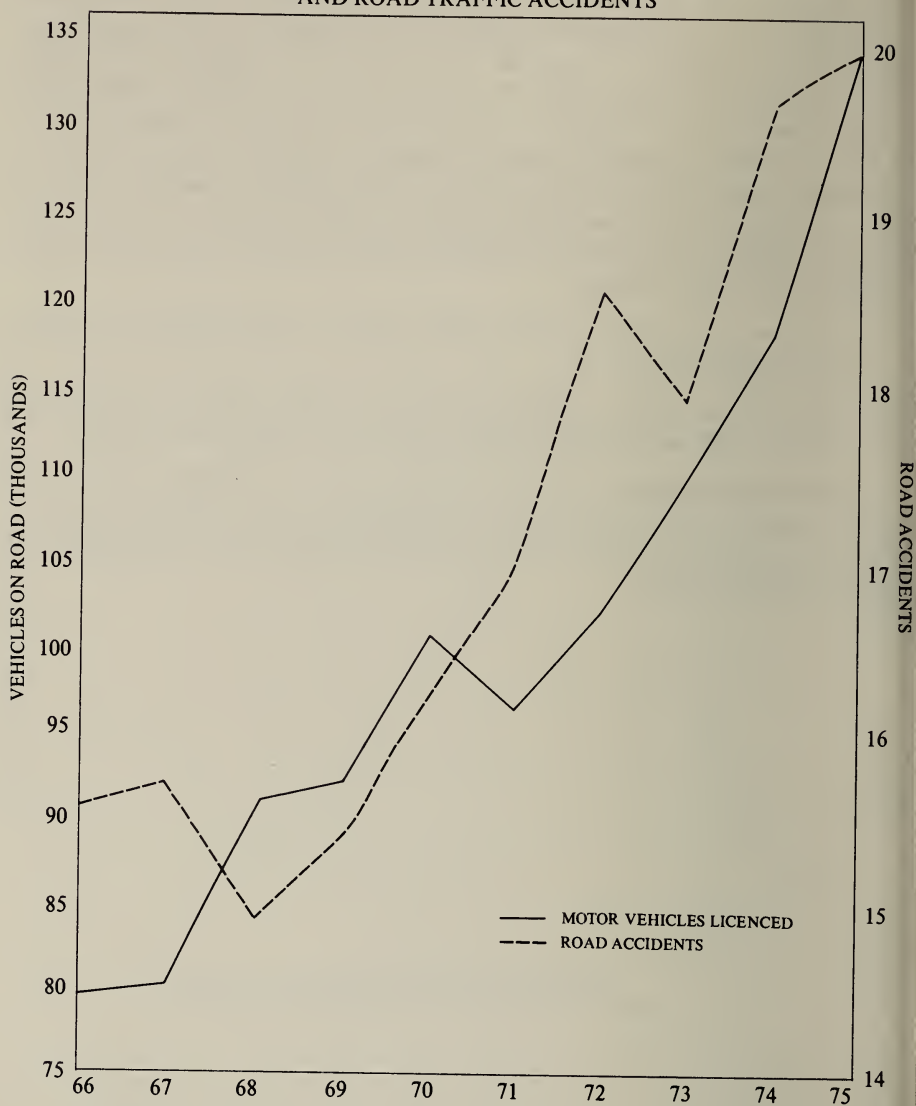




Figure 5 shows that there is little relationship between the number of vehicles licenced and registered and traffic accidents.

### **Ethnic Differences**

It has been remarked that among those killed and injured in traffic accidents East Indians are over-represented. A similar over-representation among those treated for alcoholism at hospitals<sup>(15)</sup> and those attending A.A.<sup>(16,17)</sup> has been noted. An alcoholism treatment centre located in the capital, Port-of-Spain, serves the entire country and treats between 400 and 450 alcoholics per annum. Alcoholics are also treated at two general hospital psychiatric units. The general hospital unit in Port-of-Spain admits about 100 alcoholics per annum. Another 100 are treated at private hospitals and about 50 at the small psychiatric unit in South Trinidad. Admissions to county and district hospitals may bring the annual overall admission rate to about 1,000 persons from a population of just over a million or 1.0 per thousand population per annum.

**FIGURE 6**

ALCOHOL TREATMENT CENTRE ADMISSIONS AND  
A.A. ATTENDANCE BY MAJOR RACIAL GROUPS IN TRINIDAD 1968

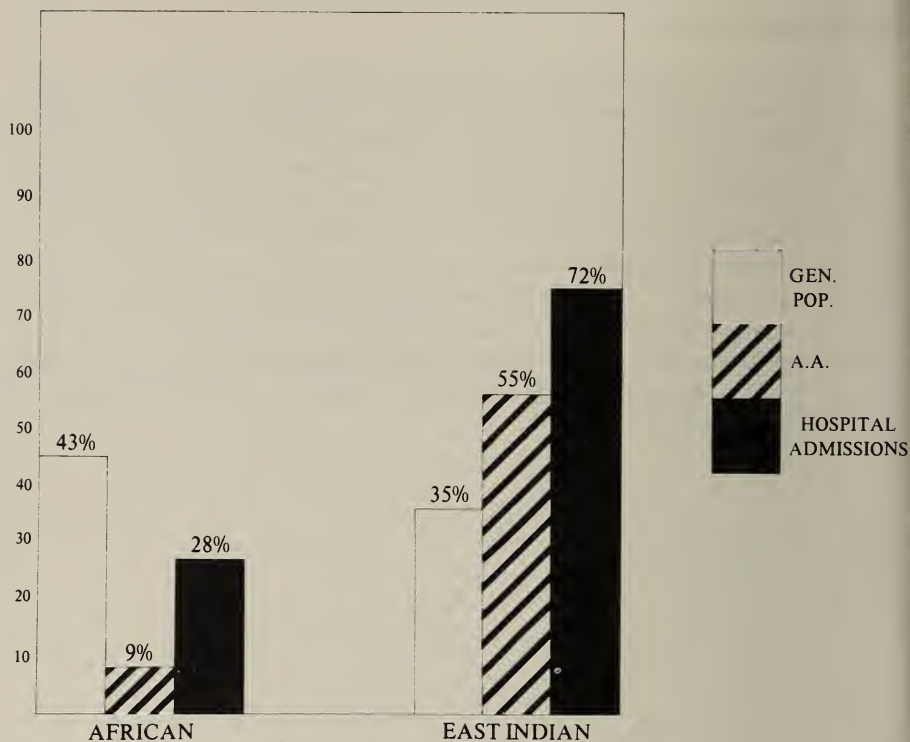


Figure 6 is taken from a study conducted in 1968<sup>(18)</sup> and shows that though East Indians at that time were only 35% of the general population (1960 census), they comprised 55% of the largest A.A. group and 72% of the admissions to the only alcoholism treatment centre in the country, Africans (Blacks) comprised only 9% of A.A. and 28% of the admissions to the treatment centre though they comprised 43% of the general population. Put in other terms this means that the East Indian hospital admission rate was 205% of the expected rate if admissions had been proportionate to their distribution. African hospital admission were 65% of expectation.

**TABLE 6**

ALCOHOLIC ADMISSIONS TO PSYCHIATRIC UNIT PORT OF SPAIN  
CATCHMENT AREA: SECTOR V (P-O-S & TOBAGO) Pop. 101,434  
55 ALCOHOLICS ADMITTED JANUARY—JULY 1977

	N.	%Admissions	%in Sector
East Indian	30	54.6	7.1
African & Mixed	20	36.4	87.4
White	3	5.5	1.6
Other	2	3.6	3.9
TOTALS	55	100.1	100.0

Table 6 shows more recent data for alcoholic admissions to the Port-of-Spain General Hospital Psychiatric Unit for the first half of 1977. This unit serves a demarcated sector with a population of 101,434. Since 1975 a National Community Mental Health Program has divided the country into five sectors with separate services. The area served by the Port-of-Spain Unit is the city of Port-of-Spain and the island of Tobago, both with a predominantly Black (or African) population. Despite this there were more East Indians than Africans admitted to the unit in the period under study.

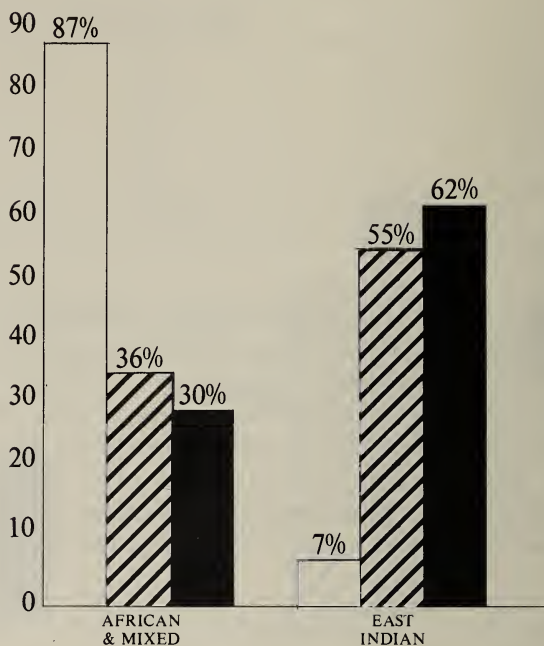
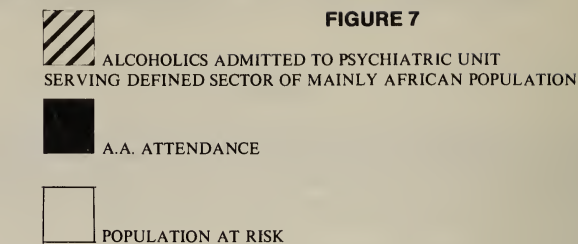


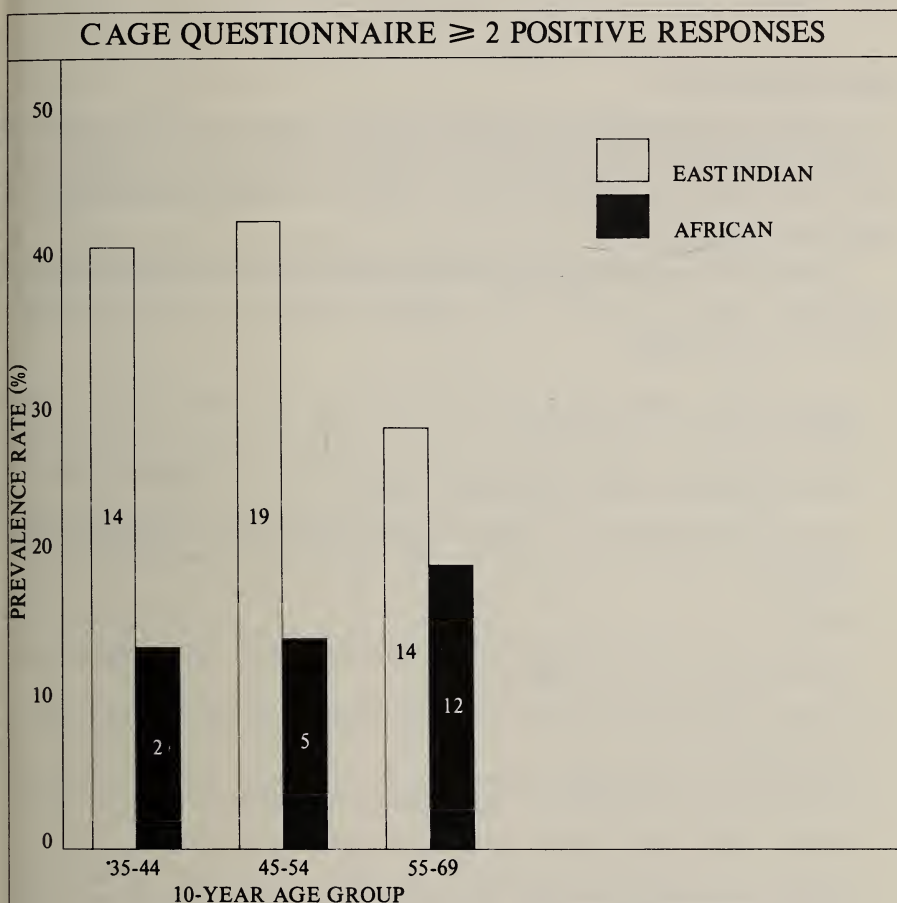
Figure 7 shows the distribution of Africans and Indians in the catchment area and the actual admissions. Actual admissions of Africans and mixed (Black) were 34% of the expected figure while East Indians were actually 885% of their expected rate.

### **Carec Community Health Survey (St. James)**

A Community Health Survey now in progress in the St. James district of Port-of-Spain by a joint team of workers from the Caribbean Epidemiology Centre (CAREC) and the Government of Trinidad and Tobago<sup>(19)</sup> seems likely to confirm our expectation that this striking difference in admission rates reflects a similar difference in the prevalence rate of alcoholism between these ethnic groups.

The survey is mainly concerned with cardiovascular problems but questions about drinking have been included. A pre-coded questionnaire is being administered and blood samples taken from 800 men between the ages of 35 and 69, half of them East Indian and the other half African, matched for age. Among the health questions in the schedule have been included four questions which have been shown by Ewing and Rouse<sup>(20,21)</sup> to have high validity in identifying hidden alcoholics. These four "key" questions known as the CAGE questions are seemingly innocent questions which do not arouse the suspicion of patients. They therefore give honest answers.

**FIGURE 8**  
**CAREC SURVEY**  
 (St. James)



Only 319 men (130 East Indians & 115 Africans) have been examined so far and only trends can be reported but Figure 8 clearly shows the preponderance of East Indians among those who have answered two or more CAGE questions positively in all three age groups.

Socio-cultural reasons have been suggested for these differences<sup>(22)</sup> but the search for possible biological factors is also being pursued.

## Summary

Figures for consumption of alcohol and for the relative price of rum in Trinidad and Tobago for the years 1966-1975 have been presented. A striking inverse correlation has been demonstrated between the relative price of rum and all road accidents ( $r = -0.978$ ,  $p = < 1\%$ ). The observation that these



accidents seem to involve more East Indians is made and data presented to show that this may be related to the very high prevalence of alcoholism in East Indians.

## Acknowledgments

I would acknowledge the help of Mr. Adrian Lambourne, statistician at CAREC for advice on the statistical treatment of figures and would thank Drs. Miller, Byam, and Beckles for allowing me to present advance material from their survey.

I would like to acknowledge our indebtedness to the Addiction Research Foundation and to P.A.H.O. for valuable assistance to the Caribbean Institute on Alcoholism.

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# EPIDEMIOLOGICAL RESEARCH IN LATIN AMERICA

by Dr. René Gonzalez and Dr. Marilynn E. Katatsky

In Latin America, interest and talent in the field of the epidemiology of alcoholism has been growing for about the past 25 years. The visit of Jellinek to Chile in the early 1950s marked the beginning of this important period. Before the 1950s, research was mainly confined to studies of clinical complications and laboratory experiments. Jellinek's teachings resulted in the development of methodologies which became widely known and utilized throughout Latin America. To some degree, present day epidemiological research in Latin America has achieved a degree of uniformity through the widespread acceptance of Jellinek's methods.

At about the same time that Jellinek visited Latin America the U.N. Economic and Social Council published the Report of the Commission of Inquiry on the Coca Leaf (11), which was the first work to be done in the area of the epidemiology dependence on drugs other than alcohol. However, it was not until the late 1960s that interest in epidemiological studies of drug dependence grew and the number of such studies finally surpassed that of alcoholism. The oldest studies almost always referred to overall levels of per capita consumption of alcohol but the data were usually limited to the official statistics, and therefore, did not take into account the high level of production and consumption of bootleg liquor. In some areas in Costa Rica, the consumption of bootleg liquor may be far greater than that of commercially prepared alcoholic beverages. Unfortunately very little

research has been conducted to estimate the quantities produced. Research on clandestine liquor production in the province of Alajuela, Costa Rica was conducted by Heath in 1974, but that research was not primarily focused on estimating the quantities involved. All of the countries have statistics on production, imports, exports, and sales of alcohol. However, in comparing per capita consumption figures for countries in Latin America with those for other parts of the world, we cannot rely very heavily on these data to draw conclusions without some adjustment for bootleg liquor production and consumption.

Census data are collected in Latin American countries every 10 years. During recent decades, the quality of these census data has increased considerably, even though there is still room for more improvement. The principal weakness in the census data is due to the tremendous geographic mobility of certain population sub-groups, especially people who live in the marginal, suburban shanty towns surrounding the metropolitan areas. This mobility makes it very difficult to identify the boundaries of the cities and often leads to a significant under-estimation of the population. Furthermore, the housing in those areas is usually improvised and non-permanent, making it difficult to get an accurate listing of households for enumeration.

Data from other existing sources which might be used to estimate the extent and distribution of alcoholism and drug dependence in the population are equally suspect and researchers are quick to point out the limitations of these data (9).

The problems that confront the epidemiologist in Latin America are not unlike those found in other parts of the world. However, there are the additional problems presented by the socio-cultural context, the oftentimes unpredictable and inconsistent characteristics of public administration in developing countries, economic constraints, and limited technical resources. Epidemiology, in general, is a relatively underdeveloped field in Latin America. Although it is taught as part of the curriculum for the Masters Public Health degree, it is not one of the strongest fields in public health.

Health statistics vary in their quality not only from country to country but within certain countries they may be better or worse for any given time period. Statistics on cirrhosis mortality, traffic accidents, homicides, suicides, hospital admissions for alcoholic psychosis, etc. are usually available, but in each case, one needs to know the details concerning how those data were collected in order to assess their relative utility. Sometimes the data are available, but not in a form which would be usable for analysis. For example, hospital admissions by diagnosis may have been compiled for a particular country by hospital with no accompanying summary of admissions nationwide. Here, one would have to cull through tables for each month for each hospital for that particular disease category.

Hospital admissions practices may exclude drug and alcohol dependent persons from treatment except for those cases with certain types of medical and/or psychiatric complications. Sometimes, the admitting diagnosis is



changed accordingly. In countries where services for detoxification and rehabilitation of alcoholics and drug dependent persons are provided, patient statistics are often collected in such a way that it is not possible to determine the percentage of persons who are recirculating through the health care system.

Data on deaths due to violent causes are almost always recorded, although the exact cause may vary considerably between suicide, homicide, and accidents, depending on a variety of local circumstances. Although alcohol and drugs may have been involved in a high proportion of these deaths, this is not generally included on the death certificate as a contributing cause.

In a recent article reviewing the epidemiology of traffic accidents (1), the authors point out that traffic accidents are the principal cause of death in the age group 14-25 in at least nine countries and, in the others, it is the second cause of death for this group. Data on traffic accidents are often incomplete. The influence of drugs and alcohol in traffic accidents is not usually recorded, and even where it is, the source of the report is not always uniform or clear. In most cases the report is based on the police officer's impression at the time. Blood alcohol testing and autopsies are very uncommon. Hence, it is difficult, without conducting special studies, to estimate what proportion of traffic fatalities and injuries are due to alcohol and/or drugs.

Data on illegal activities involving alcohol and drugs are also collected by law enforcement authorities but are rarely made available to the public. It is often difficult to obtain such data for research purposes. Once obtained, these data often under report the numbers of alcohol-related incidents, because of the way in which data are classified. When the offence is related to the use and/or traffic in drugs, there is more likelihood that it will be reported as such. In general, however, police are not trained to detect substance abuse, and furthermore, that factor may not be the primary charge for the arrest. Finally, changes in arrest data are subject to large fluctuations which may depend more on level of police activity than on the numbers of persons affected.

Because of the serious deficiencies in existing data sources, the preferred approach to epidemiological research is the population sample survey. The PAHO has convened a number of meetings aimed at the promotion and improvement of epidemiological research on alcoholism. The first of these meetings took place at Vina del Mar, Chile in 1963 (10), at which time the conceptual bases of epidemiological research were reviewed. The second took place in San José, Costa Rica (4), where the results of research from 10 countries were examined. Since that time, several other prevalence studies have been carried out, but the number of publications on this topic has diminished in recent years. Most of this research was carried out in Chile and Argentina. Some modest but notable research has also been done in Costa Rica, Peru, Colombia, and Brazil.



With a five-year grant from the U.S. National Institute of Alcoholism and Alcohol Abuse (NIAAA), the PAHO has been engaged in a five-city survey of drinking practices and attitudes. Although this study does not pretend to estimate the prevalence of alcoholism *per se*, it will provide estimates of heavy drinking and problem drinking similar to those utilized by Cahalan, Cisin, and Crossley (2) and Cahalan and Room (3). This survey involved a relatively expensive investment of human and financial resources, and later in this paper, these and other problems in conducting survey research will be discussed.

Most drug studies in Latin America have been conducted on school and university populations rather than through household surveys. Almost always, these studies have focused on marihuana use, and occasionally, have also included the non-medical use of prescription drugs. The inhalation of volatile substances has also been the focus of a few special studies. In general, these studies are based on previous research conducted in the more developed countries. The investigators often make little or no note of the fact that, in many countries, the percentage of young adults still in school beyond age 12-15 drops off precipitously. Furthermore, because of the preference for school studies, there are almost no data on the use and abuse of psychoactive substances in the general adult and adolescent population.

In 1965 the Government of Peru carried out an extensive nationwide survey of the general population on coca chewing (6) from which one publication was issued, based on the preliminary findings. For technical and financial reasons, the analysis of data was never completed. This kind of problem—that of having collected large amounts of data and utilizing them only very partially—is not uncommon in many of the countries where such studies have been conducted.

As we have seen from our discussion of the status of epidemiological research on alcohol and drug abuse in Latin America, researchers in these countries can and have benefited from the experience and knowledge already accumulated in the more developed countries. However, there is always the danger that research will be modeled after the American or Canadian experience without the proper adaptation to local conditions. Such adaptation refers not only to the correct translation of research instruments, utilizing local jargon but also cutting and adding appropriate items. Adaptation also involves an adequate study of the setting in which the research is to be conducted, an anticipation of the reactions and attitudes of the field staff and the respondents, and an evaluation of the material and human resources with which the study is to be conducted.

There is a real danger in taking up the same issues discussed in the more developed countries without questioning their relevance for the less developed countries of Latin America. Not only must we adopt a questioning attitude with respect to research designed in the more developed nations but also we must develop in our scientists the capability and talent to identify the significant issues for study in Latin America and appropriate methods and technology for examining them. We cannot wait two years for the results of

research in more developed countries to discover that one or another new drug of abuse is on the increase. These changes must be monitored at the local level by local investigators.

The importance of traditions, attitudes, and beliefs with respect to the problems studied and the investigation itself cannot be overstated. For example, when household interviews are conducted, especially in rural areas, the respondents are often women and this may make it difficult to send out teams of male interviewers. The women may fear reprisals from their husbands for having agreed to the interview. In most instances, households are crowded and it is difficult to have enough privacy for the respondent to answer as sincerely as possible. In interviewing uneducated groups, one often finds respondents answering what they suppose is expected of them. Sophisticated concepts may seem totally irrelevant to the respondent, but he or she will answer anyway, hoping to "please" the interviewer. These are problems which are found in all parts of the world but in our countries they need special attention.

Perhaps the most important constraint in the conduct of epidemiological research in Latin America is the lack of human and material resources. There are few professionals trained and experienced in the epidemiology of drug dependence in Latin America. Generally, these persons were trained in Europe or the U.S. and work for a university or for the government. For the large majority, research is not full time and they must supplement their income with private practice and/or by accepting one or more posts in other institutions. Under these circumstances, it is exceedingly difficult for the investigator to dedicate all of his efforts to research. In Latin America, the tradition of grants for research does not exist, and there are very few sources of research funds. Very few government agencies provide grants to investigators. This leaves the researcher with only one resource: to solicit grants from abroad. The investigator who attempts to obtain funds from abroad encounters certain difficulties including the barrier of working in a foreign language, and oftentimes, competing with other scientists from the more developed countries. In addition, communications with the funding institution can be difficult due to the long distances and the time involved in correspondence.

Frequently an investigator wants to develop an idea but cannot obtain adequate assistance to perfect the design or elaborate a protocol. His research proposal cannot compete with those of investigators in the more developed countries, where technical resources in statistical methodology and design are so plentiful. For a number of reasons, therefore, the epidemiological research carried out in Latin America is usually under-financed and understaffed. Some researchers have even supplemented research funds out of their own pockets.

Since household surveys are not very common, there does not exist a reservoir of trained interviewers in the population. An investigator or team of investigators rarely has the opportunity to do survey research; therefore, each time he must recruit new field staff and train them. In cities, survey

interviewers are usually chosen among social workers, students, or nurses. Transportation of the field workers, even within the cities, can present great difficulties due to the insufficient public transportation service to some sections of cities. In the rural areas, providing adequate transportation for the field workers is essential and costly.

Data processing can also present great difficulties. In practically all the large cities in Latin America there is good, highly sophisticated computer hardware available. Often, these machines are used only partially. The number and quality of computer programmers and systems analysts is very low. Furthermore, the software available is often inadequate and/or inappropriate for this type of research. There are very few people trained to use the standard social science statistical packages—software which is almost essential to work in this field. For all of these reasons, the data processing phase can be a major bottleneck.

The dissemination of research findings also presents difficulties. There are very few specialized journals which appear regularly and their circulation is not very wide. Many research monographs are reproduced in mimeograph, and consequently, their circulation is very restricted. Other works are presented at congresses and national and international meetings and eventually may be published as a product of those meetings. A few are published in North American and European journals, but again, they must be translated and they must meet the scientific criteria in the more developed countries. Thus, communication among investigators in Latin America is not good, often resulting in parallel research or the unknowing repetition of work.

Opportunities offered by a WHO Collaborating Centre such as the Addiction Research Foundation for the promotion of the development of research in Latin America are many and diverse. It could act as a centre of excellence in which Latin American professionals could be trained in the methods of research; it could also act as a centre for the collection and dissemination of information; it could also act as a centre for maintaining communication among the many scientists and institutions who work in this field, promoting among other things, the interchange of researchers between countries and institutions.

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## Remarks

# EPIDEMIOLOGY OF ALCOHOL AND OTHER DRUG-RELATED PROBLEMS

by Robert E. Popham

Before attempting some summary comments on the presentations in this session, I believe it is useful—by way of providing a broader perspective on the issues discussed—to consider for a moment the meaning of the term *epidemiology*. Even if many of us are professional epidemiologists it is good to remind ourselves occasionally what our discipline is all about.

In my view the term is often used rather loosely, for example, in conference agendas as a catch-all category for any papers dealing with statistics or surveys, or which don't fit in anywhere else.

One thing seems clear, as a scientific discipline it is *not* distinguishable because of its methods and techniques. Milton Terris, a distinguished American epidemiologist, made this quite clear some years ago.\* Let me quote from him on the point:

*Suppose we wish to undertake a prospective study of coronary heart disease. We choose a sample of individuals from the population, using methods developed by statisticians and sociologists; we perform a complete physical examination of these individuals, using methods developed by clinicians; we determine levels of hemoglobin, cholesterol, phospholipid, glucose, and uric acid, using methods developed by biochemists; we interview the subjects with regard to dietary habits, smoking history, and neurotic traits, using methods developed by nutritionists, epidemiologists, and psychologists. We follow these individuals, re-examine them at intervals, obtain death certificates as well as*

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\* Terris, M. The Scope and Methods of Epidemiology. *Amer. J. Publ. Hlth.* 52: 1371, 1962.



*clinicians' and pathologists' reports, and finally make statistical analyses of our findings. Which of these many methods, culled from a number of disciplines, is 'the epidemiologic method'?*

In fact, I believe most epidemiologists would agree that it is not method which distinguishes their discipline, but their *focus of concern*, or as some would say, the level of abstraction involved. Thus, the epidemiologist focuses on the behavior of a disease or health problem *in the population at large* rather than in specific individuals. He is concerned with *prevalence* or rate of occurrence of the disease, and with the factors which may influence prevalence.

I believe one can distinguish four phases in epidemiological research. These are:

- (1) The attempt to determine the prevalence (and where feasible the incidence or rate of appearance of new cases) of the health problem in a population, through case-finding studies, surveys, the use of documentary statistics, or all three approaches;
- (2) The attempt to determine whether or not there are differences in prevalence from one population or country to another, from one group to another within the same population, and from one period of time to another. Here one has to try to take into account all possible extraneous factors so as to be sure that any differences found reflect *real* differences in the prevalence of the disease and, therefore, say something about causal factors;
- (3) The attempt to *explain*, that is, to construct an hypothesis which might account for the differences found. Here, unlike the pathologist or psychologist, the epidemiologist will usually concentrate on factors external to the organism: he looks for factors in the environment, both the physical and the socio-cultural environment;
- (4) Finally, there is the attempt to determine whether or not the proposed explanation is correct. The epidemiologist can rarely *experiment* in the full sense of the word, especially in the case of the so-called "lifestyle diseases" with which we are concerned. He can, however, often build a convincing case through case studies (sometimes referred to as "natural" experiments), through correlational analyses of data for a broad sample of populations and sub-populations, and through follow-up studies. The establishment, by means of such research, of the etiological significance of smoking in the development of lung disease is an example.

### **Comments on the Session**

Turning now to the papers presented in the session on epidemiology, we can see that in the papers of Dr. Smart and Drs. Gonzalez and Katatsky the focus was on the *first phase* of epidemiological research: on the problems and methods of arriving at valid estimates of prevalence. Dr. Beaubrun, while

touching on data problems, on the other hand, focused mainly on the second phase—on differences in prevalence or indices of prevalence.

Dr. Smart's concern was to examine various attempts at cross-national studies and he offered as the primary justification for such studies their potential importance (1) in providing a data base for the development of international control mechanisms, and (2) in deriving *general* explanations of the nature and extent of alcohol and other drug problems as opposed to culture-bound explanations. As a prerequisite, he saw it to be essential "to develop methods of measurement which have similar validity and reliability in all countries."

Dr. Smart then examined some of the major problems of gathering trustworthy data in the cross-national study. In this regard, he reviewed:

- (1) The use of official statistics of alcohol consumption as exemplified by Sulkunen's World Alcohol Project, which is certainly the best effort of the type to date. It is noteworthy, I believe, that despite certain shortcomings in the data—to which Dr. Smart rightly drew attention—Sulkunen was able to demonstrate convincingly a worldwide trend, namely, convergence in level of consumption, beverage preferences, and in the functions of drinking;
- (2) Dr. Smart then reviewed the late Dr. E. M. Jellinek's ingenious adaptation of the traditional informant method of the anthropologist to urban literate societies. He concluded that this was a very promising approach and relatively inexpensive, albeit more time-consuming than the usual survey. I shall have occasion to return to this method at the end of the summary;
- (3) Finally, Dr. Smart reviewed different cross-national survey approaches in which the data are sought from the actual user. He concluded that the best of these approaches is the one called "joint development concurrent" which involves the participating countries in collaborative planning around clear objectives from the outset of the project. However, he noted that the approach is not without difficulties in assuring comparability of results and in organizing the undertaking.

These difficulties with the standard survey approach were very well illustrated in the paper by Drs. Gonzalez and Katatsky with special reference to data gathering in Latin American countries. For example, they noted:

- (1) The shortage of funds for research and of suitably trained people, and the lack of possibilities to secure epidemiological training in local universities;
- (2) They also noted the difficulty of drawing representative samples for survey purposes. Thus, there are often serious shortcomings in the available census data owing to the great geographic mobility of the population and the temporary character of many households;
- (3) And in particular, Drs. Gonzalez and Katatsky clearly indicated the

many difficulties involved in the direct application of survey instruments developed for use in North America. Thus, they pointed out that taking local cultural factors into account in adapting such instruments *is not merely a matter of translation into the relevant language*. Many items suitable for use in a North American context may, in Latin America, be misleading, upsetting, or totally irrelevant.

Dr. Beaubrun's handling of documentary statistical data for Trinidad and Tobago seemed to me to illustrate that, despite the shortcomings of such data, some very suggestive clues as to differences in the prevalence of problems can be obtained with proper handling. For example, the various indexes he used certainly confirm earlier impressions that there is a substantial difference in the prevalence of alcohol problems between the two main cultural groups in the country—those of African and those of East Indian origin. This is to say nothing of his remarkable finding of a strong inverse relationship between the relative price of rum and the rate of traffic accidents. Certainly this result begins to take us into the third phase of epidemiological research: that of postulating causes of differences in indexes of prevalence—in this case, economic accessibility.

### **Some General Comments**

From what has been said this session, combined with other impressions of current activities in international research, at least two points seem to me to come through pretty clearly: (1) the problems of obtaining valid and reliable data are particularly acute in developing countries, and (2) there is a preference for cross-national surveys in which the developing countries in particular are involved. At first glance this seems a bit puzzling.

As I noted at the outset, the primary *scientific* objective of epidemiological research is to discover general explanations for differences in the prevalence of the health problems of concern. In the case of alcohol and many other drug problems, the differences among the industrial countries of the Western World are probably sufficiently great for the purpose. Then, given the rather formidable data-gathering difficulties noted in the case of developing countries, what is the rationale for their inclusion? Do they exhibit unique features such that their inclusion in a cross-national study would enhance our ability to formulate general explanations for variation in prevalence?

It may be that some developing countries do, indeed, exhibit just such unique features, but my impression is that the justification does not lie in this. After all, the first phase of epidemiological research—seeking to determine prevalence—can have, and often has had, other important functions besides the scientific. Thus, it is an activity which can serve as a basis from which to mobilize community interest in alcohol and other drug problems, and hence ultimately community action; and it can provide the means by which some expertise in modern techniques of social research can be acquired by local workers.



I suggest that this "community development" function, rather than the scientific objective of epidemiological research, is the primary reason for current interest in cross-national surveys involving developing countries. There is certainly no reason to denigrate such an aim, but it is just as well to be clear about it.

For if the primary aim is community development, then one may question whether the standard survey method is the best way to go about it. Personally, I should much prefer an approach such as Jellinek's informant method, to which Dr. Smart drew attention.\* *In the first place, the amount, diversity, and length of community involvement in the actual carrying out of the project is greater.* The method requires that a considerable number of small groups meet to discuss the questions of interest in some depth. These groups are selected so that all major segments of society—age, sex, ethnic, occupational, geographic, etc.—are represented. The standard survey, on the other hand, usually involves only a comparatively small number of *non-representative* persons to supervise the filling out of a questionnaire, or to conduct short interviews at one point in time.

*There are also differences in both the richness and the validity of the data obtained by the two methods.* The schedule used to guide the discussion of the informant groups in the Jellinek method is less rigidly structured, and seeks to elicit not only data which are comparable from one country to another, but information about the unique habits and cultural arrangements in each area. In contrast, the standard survey generally seeks to use an instrument which is essentially the same for all countries. I submit that the greater the degree to which such standardization is achieved, the more superficial the information obtained through its use.

Finally, there is a serious question as to the validity of some self-report data, at least in the case of the typical alcohol use survey. Moreover, this issue of validity concerns the most important single item of information usually sought, namely, the *volume of intake* or amount consumed by each respondent. It has now been pretty well demonstrated that self-report data on this question is often likely to grossly underestimate consumption as indicated by sales figures. Sometimes as little as half the amount sold in a country is accounted for by the survey data, and in addition, the under-reporting error is *non-linear*: the discrepancy between sales and self-report data being greater for those who consume more.\*\* On the other hand, in one Swedish study in which respondents were asked to report, *not* on their own

\* The method is described in detail, and some examples of its application given in: Popham, R.E. (Ed.). Jellinek's International Survey of Drinking Customs. Toronto: Addiction Research Foundation 1976. Substudy No. 805.

\*\* See: Pernanen, K. Validity of Survey Data on Alcohol Use. In: R.J. Gibbins et al. (Eds.). Research Advances in Alcohol and Drug Problems. New York: Wiley 1974, Vol. 1, pp. 355-374; and Schmidt, W. Analysis of Alcohol Consumption Data—the Use of Consumption Data for Research Purposes. In: The Epidemiology of Drug Dependence: Report on a Conference, London, 25-29 September 1972. Copenhagen: Regional Office for Europe, World Health Org. 1973, pp. 57-66.

consumption, but on the consumption of others well known to them, good agreement was obtained between sales figures and the survey results.\* On the strength of this study, one would expect greater validity in the data obtained through the Jellinek informant method, since it asks the informants to report on the consumption levels of groups well known to them rather than on their own behavior. And indeed, the most comprehensive trial of the method, which occurred in Finland some years ago, would appear to confirm this expectation.

Thus, it seems to me that the Jellinek informant method is better suited than the standard survey to *both* aims of epidemiological research: the community development *and* the scientific.\*\* However, there is little doubt that it is a more time-consuming method; also it may involve more organizational and management problems, and the data obtained are not as readily quantified and computerized. But I doubt that one can have it both ways: the faster and easier it is to apply the method in epidemiological research, the less profound is apt to be the understanding achieved.

\* Cited by Pernanen 1974, *ibid*.

\*\* Perhaps needless to say, in the ideal one should not rely on any one method to secure a thorough understanding of the problem of concern in a given area. The available documentary statistical and historical data should be utilized as well as informant and survey techniques. At least two attempts at such case studies in depth were made by Jellinek, and although incomplete at the time of his death, indicate very well the potential value of the approach. See: Popham, R.E. (Ed.). *Jellinek Working Papers on Drinking Patterns and Alcohol Problems*. Toronto: Addiction Research Foundation 1976, Substudy No. 804.



## **Alcohol and Drug-Related Problems**



# THE DRUG SCENE IN INDIA

by Dr. Narendra N. Wig

The history of drug dependence is no different in India than in the rest of the world. From time immemorial, substances have been tried for their psychoactive properties and pleasurable effects. In the oldest of Indian religious texts, such as *Vedas*, there is mention of Som-ras which is generally believed to be alcohol or some similar intoxicant. There are many prayers and hymns in the praise of Som-ras in these texts. The history of cannabis is a little more difficult to establish, but by the 8th century A.D. it had been recorded in many Indian medical treatises. It is difficult to say exactly when the name of Lord Shiva, third major deity in the Hindu trinity, became associated with the use of cannabis, but for many centuries now this association has been well established. According to Indian mythology, Shiva, who is regarded as the god of destruction, is immune to all poisons. He is pictured as a wandering ascetic, with snakes coiled round his neck. He traditionally lives on snowy Mount Kailash with his consort, Parwati, and is often visualized as drinking *bhang* (cannabis leaves) and *dhatūra* (stramonium seeds). There are numerous references to such imagery in Indian literature and art. As expected, wherever in the country the Shivite cult was popular, the use of cannabis was wide. It has also been used by many ascetic sects as an aid to meditation.

The use of opium in India dates back a long time, too. When the Europeans first came to India in the 16th century, the opium trade was regarded as important. By the 19th century, opium was widely used among

the princes and noblemen. With the decline of the Mughal Empire, a number of princely states cropped up, and in their historical records there are repeated references to opium-taking leading to the downfall of many dynasties. The Avadh Nawabs at Lucknow and Sikh rulers in Punjab were particularly note-worthy. A German doctor, Honigberger, who visited the court of Maharaja Ranjit Singh in Lahore in the 19th century has written a beautiful account, in his book *35 Years in the East*, of how the royal family was addicted to opium and cannabis. Maharaja Ranjit Singh's eldest son could not be given the responsibilities of the throne because he had become a physical and mental wreck at an early age because of drugs. Similar references can be found in many other parts of India.

One important event in the 19th century was the appointment of the Indian Hemp Commission in 1893 by the government. Its purpose was to determine how dangerous the use of Indian Hemp was to health and how its use should be regulated. The report is regarded as an important landmark.

### **Drug Scene in India at the Time of Independence—1947**

At Independence, the use of opium was licenced and it was available at licenced shops in most cities. The same system was in effect for cannabis preparations, *bhanga* and *ganja*. However, the use of *charas* (hashish) had been strictly controlled following the Indian Hemp Commission Report in 1893-94. The use of cannabis (and use of opium to a lesser degree) was fairly wide spread. The use of alcohol was relatively less common, and was mostly confined to the very poor or the very rich, Westernized classes. The licencing of liquor shops in the Indian cities by the British Government was considered by the national leaders as an attempt by the foreigners to degrade social values and weaken the national character. Accordingly, prohibition became an important plank in the national movement for independence launched by Mahatma Gandhi and the Indian National Congress. The use of other dependence-producing drugs such as injectible opiates or sedatives and stimulants was almost unknown in pre-independence India.

### **The Current Drug Scene in India**

There have been remarkable changes in the three decades since independence. As expected, at the inauguration of the new republic in 1950 the policy of prohibition was laid down as a fundamental part of the Constitution. The congress governments in different states zealously tried to introduce prohibition. However, this policy ran quickly into trouble. In every state, there was a growing need for money for development in the field of education, health, social welfare. Excise revenue seemed to be one method of getting quick money. Prohibition was also costly and cumbersome to implement. The other difficulty was the change in attitudes among educated Indians. Growing numbers acquired the lifestyle of Western societies and alcohol consumption increased. During the prohibition debates

in the mid-1950s, when Shri Morarji Desai, then Chief Minister of Bombay State (and now Prime Minister of India), insisted on continuing prohibition in Bombay, most of the English newspapers ridiculed the policy and tried to mobilize public opinion against it. The prohibition camp retorted that the people who read and wrote English newspapers themselves took alcohol. Anyway, in the 1960s most states of India tired of prohibition and one by one began to liberalize drinking laws. Following the 1966 elections, when non-congress governments came to many states, there was almost total reversal of prohibition policy. In fact, a number of states began to manufacture alcohol. Excise revenue went up enormously. For example, at the time of the partition of India (1947), the State of Punjab had an excise revenue of about 20 million rupees; by 1976, the combined excise revenue from the two bifurcated States of Punjab and Haryana (which constitute the old Punjab State) was roughly 600 million rupees. The use of alcohol no longer remained confined to the very poor and very rich; it had spread to the middle and lower-middle classes, to students and young people. In the 1940s, perhaps only 5% of students on an average university campus drank alcohol. Today, the number would be 40-50%. Clearly, there has been an enormous change in social attitudes in the past quarter-century. It is becoming quite customary, particularly in cities, to be offered an alcoholic drink during an evening.

The opium and cannabis scene has also changed. As a signatory to various international treaties on narcotic drugs, India gradually banned the sale of opium, which is no longer openly available. Similarly, the sale of cannabis products, *bhang* and *ganja*, was greatly reduced and by 1965, except in four states (out of 20), cannabis products were banned. It is ironical that India has banned cannabis, a traditional drug with wide social acceptance and with questionable health risk while it has, in effect, promoted alcohol, the harmful effects of which are too well known. One cannot help but think that there was no lobby for cannabis because it was the drug of the poor, while alcohol was liberalized because it found strong support among the educated and vocal sections of the urban population. Perhaps this is the price of "modernization."

In spite of the ban on cannabis and opium products, they have not disappeared. Surveys suggest that crude opium is still fairly prevalent in the villages of the border districts of Punjab. Cannabis preparations, as expected, were difficult to eliminate and law enforcement in this regard has never been very strict. The cannabis plant, of course, grows throughout India, particularly in the northern foothills. Anybody can obtain it easily and cheaply. The law-enforcement agencies do not bother much about *bhang*, which is the drinking preparation made from cannabis leaves, but do punish possession or sale of *charas* (hashish) more strictly.

In recent years, India has experienced a new trend in cannabis abuse. Cannabis is being used by students, not in the traditional form of *bhang* drinking, but in the American way—smoking. Cannabis has thus travelled



full circle, from East to West and West to East. In the past 25 years, there has also been a considerable increase in the use of opiates, barbiturates, sedatives and tranquillizers, and stimulants, such as amphetamines. Their use is particularly common in big cities. Amphetamines are most common among students, while barbiturates, Mandrax,\* and other sedatives are becoming a new menace in the affluent rural sections of north west India.

### **Common Drugs of Dependence Currently Used in India**

*Alcohol:* Both beer and spirits (whiskey, gin, rum, brandy, etc) are freely available and locally manufactured. There is hardly any wine production and no significant wine consumption. Most alcohol consumed by poor people is locally distilled crude spirit. Illicit distillation is widespread.

*Opium:* Usually ingested as a pill, or smoked in clay pipe. It is usually crude, and varies in strength from sample to sample.

*Morphine, pethidine (meperidine):* Usually injected. Sale controlled by medical prescription.

*Barbiturates:* Usually consumed in the form of tablets. Preparations are basically the same as in the West.

*Amphetamines:* Either dexamphetamine alone or in combination with barbiturates. Taken orally in tablet form.

*Mandrax:* Tablet contains methaqualone 250 mg plus diphenhydramine 25 mg. Taken orally. Major and minor tranquillizers are also freely available. The sale of barbiturates, amphetamines, Mandrax, and tranquillizers is controlled by medical prescription, but many chemists are less than scrupulous.

*Cannabis:* Three preparations are commonly used: *Bhang*, a drinking preparation made with leaves and small stems; *ganja*, a smoking preparation made from dried flowers of the female plants; and *charas*, a resinous material, similar to hashish, used for smoking. *Ganja* and *bharg* are not always distinctly different, and when smoked are comparable to American marihuana.

*Other Drugs:* *Dhatura* seeds (stramonium) are occasionally mixed with cannabis. Cocaine use is rarely reported. Use of hallucinogens is extremely rare.

### **Prevalence of Drug Abuse in India**

The following information is partly taken from an earlier paper (Wig and Varma, 1977). Reliable data for prevalence do not exist. Very few studies which scientifically measure prevalence of drug abuse have been reported. The following reports, however, give some idea of the size of the problem:

1. Chopra (1940) deduced that 1% of the Indian population was addicted to cannabis.

\* In Canada, Mandrax® is a registered trademark of Roussel (Canada) Ltd.

2. Chopra (1971) estimated that there are over 3,000,000 cannabis habituates in the country (population in 1971, 548 million).
3. Chopra and Grewal (1927) found that 0.1% of the population of central Punjab was addicted to opium. However, in 1964, only 1,511 opium smokers were registered in the entire country (Chopra and Chopra, 1965).
4. Dube and Handa (1969) reported that of 28,767 normals, 0.77% habitually used alcohol and 0.47% other drugs. The same authors reported these rates as 1.38% and 0.83% respectively in 1971.
5. Elnagar, Mitra, and Rao (1971) reported that 18 (1.3%) of 1,383 inhabitants of a village were addicted to alcohol or drugs.
6. Thacore, Saxena, and Kumar (1971) found 50 cases (1.9%) of addiction among 2,696 members of 497 families surveyed. Out of these 50, 48 were addicted only to alcohol, one to cannabis, and one to both alcohol and cannabis.
7. Thacore, Saxena, and Kumar (1971) found that 21% of medical students who sought psychiatric treatment had a history of drug abuse. Students seeking psychiatric help, in turn, represented 1% of the total medical student population.
8. In a survey conducted among college and university students in Chandigarh (Varma, Ghosh, Singh, and Wig, 1975), 18.9% of students admitted to having taken one or more of the following drugs—barbiturates, amphetamines, cannabis, Mandrax, and LSD—at some time, and 1.5% to 2.0% could be considered regular users.
9. In another survey conducted among the general population of the Punjab cities of Chandigarh and Jullundur, Wig and Varma (1977) were able to identify, respectively, 90 and 49 long-term (over five years) heavy (1 gm or more of *charas* or its equivalent per day) cannabis users. The populations of the two cities are approximately 300,000 and 200,000 respectively. The long-term, heavy users were estimated to be in the range of 500 to 1,000 in each city.
10. In a study of selected villages in Punjab (Deb and Jindal, 1974), alcohol abuse was found in 74% of all persons above 15 years. The annual per capita expenditure on alcohol was 2,000 rupees.
11. A study of drug abuse in villages of the Sangrur district of Punjab (unpublished data) revealed an overall prevalence rate of 28.7% (in population aged 10 years and above). Tobacco abuse was the highest (40% of the population), followed by alcohol (25.55%), opium (18.9%), barbiturates (6.2%), and cannabis (2.2%) (Cf. ICMR Bull., 1977, p.2). Most of the opium abusers were dependent on the drug. It was seen mostly in males. Alcohol abuse started earlier in life and preceded the abuse of opiates. The drug abuse was more prevalent in farm labor as opposed to people with more sedentary professions.

12. In a study of 1,132 students in Calcutta University (Bannerjee, 1963) a prevalence of abuse of tobacco in 26% and amphetamines in 11.4% was found. A survey conducted in selected colleges of Delhi (Mohan and Arora, 1976) showed a prevalence rate of 24.7%. Tobacco abuse was highest, followed by alcohol, tranquillizers, amphetamines, opium, and barbiturates. A similar study among Bombay University students (Chitnis, 1974) revealed a prevalence of 19.7%. The most commonly abused substance was cannabis, followed by amphetamines, barbiturates, LSD, opium, heroin, cocaine, and morphine. The prevalence rates in the above reports are not fully comparable due to differences in the drugs surveyed and whether use, abuse, habit, dependence, or addiction (and the precise definitions thereof) was the subject of study.

### Extent of Drug Use

On the basis of the above, and other impressionistic information, I would estimate the following:

*Opium:* 2 to 3% of adult males in rural north India use it regularly. Codeine is also occasionally used. Heroin is very uncommon.

*Morphine and pethidine (Demerol\*) injections:* Use is confined to urban educated groups. Prevalence is perhaps 0.1 to 0.2% of the general urban population. Dependence in medical profession (doctors, nurses, dentists) is higher, perhaps 1-2%.

*Barbiturates:* Use is rapidly increasing. Often used as a cheap substitute for alcohol. Severe dependence remains relatively rare.

*Amphetamines:* Fairly widely used among students. In one study (Varma et al., 1977), amphetamine intake was considered to be the single largest drug problem among students.

*Mandrax (methaqualone and diphenhydramine):* Use has rapidly increased in the past 10 years, particularly among urban youth, but because of newly restricted sales it is now coming down.

*Cannabis: Bhang* drinking is a well established social (and often religious) custom in many parts of East India. In many religious cities, 5 to 10% of the adult male population use it regularly. *Ganja* smoking is widespread in Uttar Pradesh and Bihar among farmers and unskilled workers.

\* In Canada, Demerol® is a registered trademark Winthrop Laboratories, a division of Sterling Drug Limited.

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# ALCOHOL AND DRUG-RELATED PROBLEMS IN NIGERIA

by Dr. Amechi Anumonye

Literature regarding alcohol use in Nigeria is scanty. A historical socio-economic background was produced by PAM in relation to trade and control of the sale of alcohol in Nigeria. PAM was working from Finland. Other references have come from the works of Lambo, Asuni, Odejide, as well as Anumonye and co-workers.

There is a much richer reference list for drugs other than alcohol but even this is scanty compared with world literature. The major workers in the field are Lambo, Asuni, Borroffka, Adesina, and Anumonye.

## Patterns of Alcohol Use

Nigerians have always used some form of alcoholic preparation. The most common ones are palm wine which is the latex from the palm trees and *pitto* and *burukutu*, which are made from grain. In the fresh state these three preparations are rich in vitamins and do not have a high alcohol content. Storage of course leads to fermentation and to an increased alcohol content. Besides these three beverages there are also locally distilled alcohol preparations having various local names—for example, Oogoro, a locally prepared gin. Until about five years ago, Oogoro was illegal. It is now freely available, even at busy roadsides.

Alcohol is being increasingly used and will certainly become a major problem of the 1980s for several reasons:



1. The lifting of the prohibition of "illicit" (locally brewed) gin increases the availability of alcohol and the associated predictable problems;
2. The proliferation of breweries within the last 10 years (apparently for political purposes) makes the dangers inevitable; almost all states in Nigeria brew their own "state" beer;
3. Local distilling of gin and bottling of imported liquor have now received government blessing;
4. The gradual disappearance of the indigenous "palm wine" from the city hotels and beer parlors has made way for more potent alcoholic beverages.

### Patterns of Drug Use

In Nigeria, as in many African countries, information on drug abuse is scanty because there have been few medical observations. Ongoing research studies on drugs and alcohol use are fewer still. Very little concrete information has come out of the major African conferences. For example:

1. At the 3rd Pan-African Psychiatric Conference in Khartoum in 1972 a few papers on drug abuse were presented but no concrete data were available;
2. The Nigerian Medical Association, at its annual conference in 1974, devoted part of the scientific session to drug abuse as did the Association of Physicians in Nigeria in the same year. Yet there were no definite positive statements.
3. The workshop of the Association of Psychiatrists in Africa, held in 1974 in Nairobi, was also devoted to drugs and alcohol in Nigeria, but again, no definite statements could be made.

For the past 20 years there has been indiscriminate sale of medications by pharmacists and patent medicine shop owners and vendors. Young people walk in and buy even dangerous drugs over the counter; in certain markets in Nigeria it is possible to obtain almost any type of drug in the pharmacopias.

There is often, too, an indiscriminate dispensing of medication by doctors, many of whom have private clinics and hospitals. The easy availability of drugs (dependence producing or otherwise) makes the problem a real one.

The following are some of the common drugs of abuse available to Nigerian youths.

1. *Amphetamines* are used for "kicks" but more so by students for keeping awake. In the northern states of Nigeria, amphetamines were freely used by young (and old) people to reduce appetite after the recent drought. It was also reported that farmers were also taking them for extra strength.
2. *Barbiturates* are used more as a means of suicide than for pleasure

leading to addiction. The use of benzodiazepines like chlordiazepoxide and diazepam is also common.

3. Mandrax\* (a methaqualone preparation) abuse occurs sporadically among student groups in the cities.
4. *Cannabis* appears to be the main hallucinogen commonly used among Nigerians. LSD is relatively uncommon.
5. *Narcotics* (opiates) and *cocaine* are not yet freely available, except pethidine which is occasionally abused by the medical profession.

So far a definite drug pattern has not emerged in Nigeria. Most of the early observations were on adult cannabis users but youths have surpassed their elders within the last 10 years. From time to time an epidemic occurs as was the case among Lagos youths. In parts of northern Nigeria, cannabis and amphetamine abuse is rampant but no sustained pattern has been detected. Barbiturate use is common, too, but extensive heroin abuse has not been recorded yet. For most workers in developing countries the association of drugs of abuse with industrialization, detribalization, and urbanization is an ominous reality.

### **Obvious Change in Attitudes**

We can infer future trends from the attitudes of Nigerian youth to alcohol and drug use today. Since there has been an obvious increase in the use of drugs the question for the future is "Where are we heading?"

It is a worrying thought that just over 30 years ago American drug abuse was virtually restricted to morphine abuse by middle-age Caucasians living in urban slums. The trend today is intravenous use of heroin not only by the Caucasian adult but also by Black American and Puerto Rican youths. What is most important is that the predominant user is a young person.

The tendency for youth to abuse drugs is also strong in the United Kingdom. With the present communication explosion, improved transportation, and an increase in personal pocket money even among youths in the developing countries, the plaguing question for Nigeria seems to be "Quo vadis?"

Cannabis use is said to have increased in the United Kingdom and in Indian universities. This phenomenon in the universities is said to be new and is also seen in Nigerian centres of higher learning. This, too, is ominous. Our clinical experience is that cannabis, like alcohol, is not completely harmless.

Drug abuse is no longer restricted to people from minority and poor socio-economic groups, even in Nigeria. Drug abuse does not recognize socio-cultural or socio-economic boundaries. It worries lower, middle, and

\* In Canada, Mandrax® is a registered trademark of Roussel (Canada) Limited.

upper class parents. Use of alcoholic beverages among youths is also common and is also on the increase. Many Nigerian investigators are also worried by the increased multiple drug use by youths, especially simultaneous use of drugs with different pharmacological value.

There is no doubt whatever from our findings in Nigeria that developing countries are facing the drug problems already familiar to developed countries because of the peculiarities of the space age generation. The traditional alienation and unconventionality which adolescents experience have been heightened by the communication explosion from industrialized, urbanized, and acculturated communities.

### Observations on Use

Some observations regarding alcohol and drug use in Nigeria and other developing countries are worthy of reflection.

1. Drugs and alcoholic beverages which are traditional in some parts of the world are now increasingly consumed outside the traditional regions. Just as more and more cannabis is used in America and Europe so is it in Nigeria. Use of cannabis in Nigeria has been on the increase since 1945. Also, whiskey, wine, and beer are replacing palm wine, *pitto*, and *burukutu* in Nigeria.
2. According to our studies in Lagos between 1974-75, 10% of high school students in one Nigerian city had used cannabis at least once in the previous six months.
3. Cannabis use by Nigerian university students has increased at a rate similar to that experienced by some European countries.
4. Alcohol and other drugs are not used today as they were in the past nor as they are still used in the small communities. Palm wine, *pitto*, *burukutu*, and the local gin (Ogogoro) are served to friends but their primary use is for religious rituals and traditional ceremonies. The community frowns on intoxication, especially during such august occasions. Drunkenness therefore is not commonly observed or tolerated.

### Statistics

Researchers from the College of Medicine at the University of Lagos have found great difficulty obtaining reliable official data on alcohol. Government record-keeping of importation and distribution is unfortunately bad and alcoholic and non-alcoholic beverages are recorded only as drinks, with no attempt to separate beer from wine from spirits nor from non-alcoholic drinks. Nor is there any register from which to obtain information on local preparations. Also, there have been governmental attempts to contain inflation by controlling the sale of many articles of trade in Nigeria,



including the sale of alcoholic beverages. It is therefore impossible for researchers to obtain reliable information from salesmen or retailers.

Although impossible to prove statistically, the general impression is that there is an ever-increasing usage of alcohol and that it, as in the developed countries, is culturally, socially, and politically condoned.

## **Nigerian Youth and Drug Use**

The following observations can be made about drug use by Nigeria's youth.

Although in developing countries "adolescent rebellion" has not reached the intensity that it has in the Euro-American countries, the motives for drug-taking are the same—curiosity, peer group pressure, independence, pleasure, the kick, the need to escape, and "mind-expansion."

The intravenous use of drugs is said to be the route most likely to result in dependence and in serious medical complications. While injection of any medication is the method preferred by Nigerians, self-injection is still uncommon. This fact has important public health and preventive implications for controlling abuse among Nigerian young people.

*Adult behavior:* In all cultures it is adults who focus attention on abuse by the young of socio-culturally disapproved drugs while tending to ignore the abuse of socially-accepted ones such as alcohol. Our limited data—as illustrated by disruptive behavior and automobile accidents—indicate there are more young people abusing alcohol than there are abusing other drugs.

*Sex:* More males than females use cannabis, amphetamines, and Mandrax in Nigeria, a ratio different from certain Euro-American patterns. Perhaps the reason is because our communities restrain the females more than the males. How long this cultural protection will last is a matter of conjecture. Young Nigerian females are already overtaking their mothers and catching up with the boys in alcohol use.

*Peer group:* Peer group pressure to abuse drugs is more noticeable among males than females, although the latter are more interested in such peer-oriented things as fads and fashions. This suggests, perhaps, that females are more able to channel peer pressures into areas other than drug abuse.

*Family:* We in Nigeria do not have reliable information about the role of the family in drug use. A one-to-one relationship of child and parent is uncommon in a country where extended families are the norm. With urbanization and the progression to a nuclear family system there are bound to be some new patterns. Must we follow the developed nations?

*Information:* In the less developed countries useful, internal information is not only scanty but the little that does exist and is disseminated is not always accurate. This observation is of great importance in the developing

countries where what is often handed down as authoritative information has, in fact, emanated from other countries. Another point about information: there is a real fear that drug education may corrupt the innocent.

### Community Attitudes

It is important to go on reminding ourselves that the responses of society to the non-medical use of drugs will depend on how its individual members and institutions perceive the problem. This, in turn, depends on prevailing attitudes and beliefs regarding people's reasons for drug-taking, as well as on currently existing cultural and social value systems.

Social value systems are particularly important in developing countries with regard to the relative worth of material possessions and spiritual, cultural, and traditional beliefs and experiences; with regard to the respective importance of civic rights, prerogatives, and responsibilities; with regard to social ideas of right and wrong.

Having watched the drug scene change *drastically* in Britain within a five-year period—1964 to 1969—and now again living in a country where urbanization, industrialization, detribalization, and cultural disorganization are said to take place at the speed of 10 years per annum when compared with the Euro-American rates, I cannot help but ask again the question “where are we bound?” Where shall we be in 10 years' time?

### What We Can Share with the Developed Nations

The problems—medical, social, and economic—associated with alcohol and drug abuse in Nigeria and the observations regarding these problems are clinical impressions. The major concerns in Nigeria are:

1. Road traffic accidents as a result of intoxication;
2. Suicidal behavior in association with alcohol abuse;
3. Cirrhosis of the liver and peptic ulcer, cardiovascular diseases (possibly associated with diabetes mellitus), and central nervous system disturbances due to chronic alcoholism;
4. Social disruptions and socio-economic problems caused by alcohol abuse;
5. Increasing use of cannabis towards which government has adopted a liberal attitude while maintaining stringent regulations against trafficking;
6. Misuse of amphetamines by students and paranoid psychoses in the populations threatened by starvation after droughts in the northern parts of Nigeria. (The phenomenon among the people along Nigeria's northern borders is of interest because the Nigerian government has prohibited the import of amphetamine into Nigeria except through



strict government channels. It is believed that the amphetamine that is available comes from the northern border countries which do not have similar regulations. These countries import some of their medical supplies from overseas countries through a Nigerian seaport: Nigeria imports amphetamine for her northern neighbors and some of this is stolen at the custom wharf in Nigeria);

7. Barbiturates are used more for suicide than as drugs of dependence. They are, however, being used by educated people for sedation after amphetamine use;
8. Benzodiazepines are easily purchased from chemist shops, patent medicine vendors, and even in open markets. Their dependence-producing properties are not yet fully recognized or acknowledged in the country;
9. The narcotics are not yet easily available. Apart from pethidine, which has become an occupational hazard for medical practitioners and medical workers, narcotics do not constitute a problem as yet. LSD and similar drugs are not freely available.

### **Cultural Traditions and Values**

Nigeria is an authoritarian country and holds moralistic attitudes towards the use of alcohol and other drugs.

1. Alcohol and drug abuse are therefore regarded as weaknesses;
2. Nigerians regard alcohol intoxication and alcoholism as the individual's personal concern rather than as a national issue.
3. The revenue value of alcohol, like that of tobacco, is a political issue with consequent international implications.
4. In most Nigerian sub-cultures, the use of beer and wine is uncommon, especially in the performance of cultural rites. Palm wine and spirits in moderation are preferred. People, therefore, feel they do not have to take cognizance of the risks involved, in view of the fact that the culture does not accept excessive drinking.

### **Types of Intervention**

Because alcohol intoxication is regarded as a personal problem outside the metropolitan areas, the management of alcohol intoxication is a private, family issue.

Drug abuse is not a problem in rural areas. In the cities, the management lies in the hands of hospital personnel and traditional healers.

On the whole, the number of alcoholics seen in the hospitals is still very small compared with the magnitude of the problem in the developed nations.

Medical management consists of drying out the patient. There are very few people specialized in or interested in the further care or prolonged follow-up of alcoholics or drug abusers.

Legal interventions in Nigeria are purely preventive, dealt with by Customs Preventive Officers, the police, and the courts.

There has not been a need to recruit a large number of hospital personnel for the management of alcohol or drug abuse in Nigeria. Nor has there been a need for special facilities. This has been the case because of Nigeria's culture and tradition as well as the country's rate of development. There is no doubt that, as urbanization, industrialization, and cultural disorganization spread to the more remote parts of the country, the number and degree of problems associated with alcohol and drug use will begin to approach those of the developed and over-developing countries.

Our concern is: how soon? Our concern is: in what direction? It therefore is important to acquaint ourselves with the problems of other countries in order to prepare for the adapting of the internationally-derived information and experience to problems of Nigeria.

### **Adaptation of Internationally Derived Information**

Nigeria and other developing countries, while being aware of the differences between them and the developed nations, need to associate with those nations in order to recognize the problems which eventually will invade their own countries.

Methods of data collection need to be similar in all countries so as to make interchange of information meaningful. With commonality of data collection will come an increased understanding of the importance of epidemiological data emanating from other countries. As well, information coming from the developed countries knowledge about management and prevention—when terminology is standardized, valid, and reliable—will be more meaningful to the people of developing nations.

# ALCOHOLISM AND DRUG ABUSE IN MEXICO

by Dr. Ramón de la Fuente and Dr. Carlos Campillo-Serrano

In Mexico, like in many other countries, alcoholism and abuse of other drugs differ as to extension, patterns of incidence, social implications, and affected populations. Therefore, we will deal with each problem separately.

## **Epidemiology of Alcoholism**

Although we lack data derived from well-planned, systematic epidemiological research, and we are uncertain as to the total number of alcoholics, the different levels of alcohol consumption among the populations, or what disabilities are caused by its abuse, we can say that alcoholism is a serious health problem in our country.

*Indirect Rates.* Based on the death rates resulting from liver cirrhosis, and using Jellinek's formula, some authors have calculated that among the population older than 20 years, and for both sexes, the percentage of alcoholics varied in 1971 between 5.7% and 7% (5) (22) (24). Those who arrive at 5.7% modified the original values of the formula to make them more congruous with the conditions that prevail in Mexico. They assume that, because of undernourishment, the percentage of alcoholics who develop cirrhosis is higher than that calculated by Jellinek for alcoholics in the North American population. The rate of 7% was calculated using the original values. We hesitate to choose among the two figures because we lack studies that are of a truly good facture.

There is also another aspect to consider in relation to the reported data: in Mexico death certificates are not very reliable (1). It is quite probable that the number of cases of liver cirrhosis is larger than what is recorded and reported.

*Direct Methods.* Another way of approaching the problem is to review different direct surveys carried out in Mexico between 1958 and 1968. These surveys may be divided into two groups: in the first group, a narrow criterion of alcoholism was used, that is, only the most severe cases were labeled as alcoholics. The results of these surveys may be found in Table 1. It is remarkable that, in spite of the differences among the populations approached, the different methods used, and the variety of definitions of what constitutes an alcoholic, rates do not differ significantly.

In the second group of surveys the operational definitions of Marconi (27)—so widely accepted in Latin America—were used. These operational definitions divide the subjects into four categories: a) pathological drinkers or alcoholics, b) excessive drinkers, c) moderate drinkers, and d) abstemious.

An alcoholic or pathological drinker is defined by his loss of control when drinking or being incapable of abstaining. The remaining categories are defined in terms of the quantity of beverage consumed at a given period of time and the number of times a subject drinks per year. This way of classifying is at variance with the original classifications used by Jellinek. Thus, pathological drinkers or alcoholics correspond to types *gamma*, *delta*, and *epsilon*, and the excessive drinker category covers *alpha* and *beta* types.

Of these surveys, only two are considered here because there is a methodological discipline in their design, and because in both studies similar conclusions are reached in spite of the differences among the populations (rural and urban) and diversity of objectives, methods, and theoretical frame.

The first study was carried out in the northern area of Mexico City and the data were collected by medical students (12). The sample included 550 subjects belonging to the middle and lower middle classes and above 15 years of age. The second study was a part of another bigger study which was conducted in a rural town in the State of Morelos (26). Here, the data were collected by researchers who lived in the town and therefore had the opportunity to verify the accuracy of the information. The sample was made up of 209 men older than 15, all of them natives.

The results of the two studies are shown in Table 2. The comparison refers only to the male population, because in the rural study so few women drank that the authors decided to analyze only data related to men. Considering the differences among the population studied, the similarity of results is striking.

Comparison of the figures we are referring to with the figures from other Latin American countries using the same operational definitions show our results are similar to those reported for Brazil and Chile and higher than



those reported for Argentina (Table 3). Of course, no solid conclusions can be drawn because of the differences between the samples studied.

In Mexico, the sex distribution of alcoholism is one woman per every 20 men, while in Mexico City the rate decreases to one to five, a fact that could be related to urbanization. The highest number of excessive drinkers is found among people between 50 to 60 years. Finally, alcoholism is more frequent among the less cultured population and those who perform the rudimentary tasks (9).

We assume that the patterns of alcoholism in Mexico vary according to the characteristics of the region, the type of population, and the influence of demographical explosion, emigration, unemployment, industrialization, etc. Nevertheless, no empirical study to investigate such variations has been carried out.

This brief review of the epidemiological studies on alcoholism done up to now in Mexico leads us to think that there are variations more significant than in other countries and that invites us to plan studies to improve our knowledge of the real situation. A step in that direction is the research "Community Responses to Alcohol Problems" which, sponsored by WHO and financed and carried out by CEMEF, is being done in an area located in the neighborhood of Mexico City.

### **Problems Related to Alcohol Consumption**

Apparently, the death rate due to liver cirrhosis has held constant during the last 10 years, with an average of 20 per 100,000 inhabitants (Table 4). This figure exceeds those reported in the U.S., Italy, and Canada. In Latin America, it is only surpassed by Chile (34). Mortality from cirrhosis of the liver holds the first place among the male 40 to 59-year-old population (1). Between 1963 and 1969, death rates from alcoholism and alcoholic psychoses have been estimated to be 4.5 per 100,000 inhabitants, as shown in Table 5.

In Mexico the reported suicide rates are low if compared with other countries' rates. They vary between 3.5 (38) and 2.5 (8) per 100,000 inhabitants per year. Among the reported causes for suicide in 1967, 4% were related to alcohol consumption (Table 6). In the country, the homicide rates in different epochs and regions vary between 84 and 24 per 100,000 inhabitants (6) (40). These high rates are only comparable to those in Colombia (34). The use of all alcoholic beverages has been present in 51% of all cases of injuries caused by violence (9). It has also been found that there is a significant correlation of 0.86% (33) between the number of bars and other places that sell alcoholic beverages to the public and the number of transgressions found in the area.

Eighteen percent of 12,329 traffic accidents reported in Mexico City in 1973 were caused by people under the influence of alcohol (37). Cabildo (9) calculates that every day, 2% of laborers are absent from their jobs because



they are under the influence of alcohol. These data show the impact of the consumption of alcoholic beverages in Mexico.

### Availability and Consumption of Alcoholic Beverages

Table 7 shows the production and potential per capita consumption of alcoholic beverages in Mexico among the population 15 years old or more. The per capita consumption is approximate, since there are not reliable data on import, export, and clandestine production of alcoholic beverages. Besides, at some strata those that consume more alcoholic beverages per capita usually mix alcohol with coffee or soft drinks.

Another interesting fact is that the number of liquor selling places increases at a rate of 7.5% per year (5). We can then assume that per capita consumption of alcohol in Mexico is increasing, a phenomenon that has also been observed in other countries (4).

If we are right in assuming that a greater consumption of alcohol among the general population will bring about an increase of alcohol-related problems (homicides, suicides, accidents, etc.), and also an increase of excessive drinkers, it is clear that we know more about the problem to facilitate prevention.

The beverages most used in Mexico (Table 7) are beer, *pulque*, and tequila. *Pulque* and tequila are the national beverages of Mexico and both are extracted from the cactus called maguey.

Table 8 shows tax collected on *pulque*, beer and spirits from 1968 to 1972. It shows the increase of the income produced by taxes on beer and alcoholic beverages, and the effect of the consumption of alcohol in our economy. It is estimated that between 1968 and 1970 the value of the production of alcoholic beverages was close to 4,500 million pesos (5). This points out one aspect of the economical implications, a fact that has to be considered when designing preventive campaigns against alcohol abuse.

### The Use of Drugs

At the beginning of the last decade, responsible Mexicans began to be concerned about the abuse of drugs, especially by the young. Before those years, drug abuse was generally restricted to specific social groups. For instance, marihuana was traditionally used by adults in the lowest uneducated classes.

The situation underwent a sudden change. To understand that change we have to consider several factors. The mass media informed repeatedly that drug abuse had reached epidemic proportions in other countries. Our youth were not immune to the effects of those profound socio-cultural changes that have affected middle-class youth all over the world. During the last decade, there has been a remarkable increase in the use of marihuana, hallucinogens, amphetamines, and sedatives. Such increase was spotted

mainly by parents and teachers, and doctors in general hospitals and psychiatric services. An increasing number of youngsters suffering from toxic problems were seen in health clinics. For instance, a psychiatric ward in a general hospital, where cases related to drug dependence seldom were seen before, took care of 60 youngsters suffering from psychiatric alterations related to drugs in a period of two years (19).

Social concern led to the first studies in Mexico directed to find out the magnitude, distribution, and socio-cultural factors involved in the use of drugs. In 1972, CEMEF was founded to face the medical and social aspects of the problem.

In Mexico, prevalent studies of drug abuse in open populations have been carried out by means of household surveys, student surveys, and inquiries in prisons. We will analyze briefly the surveys done among students and in homes.

Since the drug dependence problem is basically a problem of the young, most of the surveys have been done among students. Table 9 summarizes the first studies. Again it is hard to compare results because every survey shows significant differences in case descriptions, case findings, screening processes, age ranks, and populations studied. As a whole, the drugs most abused are marihuana, amphetamines, and stimulants. Heroin is seldom used. It seems that drug use is more popular among people between the ages of 18 to 23.

With the purpose of investigating the use of drugs in other social groups, CEMEF initiated, after 1974, several household surveys. Five cities have already been studied: Mexico, D. F., San Luis Potosí, Monterrey, Puebla, and La Paz. We have been careful to ensure that selected samples represent each city population by age and sex.

The interviews were done by trained interviewers who were medicine, psychology, and social work students. In compiling data, controls that guarantee the quality of the observations have been used (28). Interviews were semi-structured. Table 10 shows the percentages of people who have used drugs at some time. As a whole, percentages are low and the differences between the cities studied are not too significant. Marihuana remains the most popular drug and heroin abuse is seldom encountered.

In the Mexico City sample (28), ( $n = 2,733$ ) it was found that the use of non-medical drugs is more extensive among the male population (13.8% vs 9.67% of women). Yet, in the use of psychotropics and analgesics, the relationship is inverted: 30% men vs 40% women. People 18 to 27 years of age are top consumers of non-medical drugs. The age peak for consumption of ansiolitics was from 50 to 60.

Household and school surveys are not suited to screen subjects who use heroin and/or inhale solvents, because these people generally do not have a stable home life and do not attend school.

There are indications that in some cities along the northern border

heroin use is already significant. For instance, in Tijuana, 40% of the patients who sought help because of drug dependence had used heroin. Between 1973 and 1974, 201 persons were treated for overdose at the Civil Hospital of Nogales, Sonora. Of the subjects arrested for crimes of violence in that locality, 55% were heroin users (36). No epidemiological study that may indicate the real proportions of this issue has been carried out yet. CEMEF has initiated an incidence and prevalence study which will show some data in the near future.

Another problem that has been observed, mainly in places such as Mexico City, Acapulco, and Monterrey, is the inhalation of industrial solvents. It occurs particularly among children from 11 to 15 years old, who belong to the poorest and marginated social strata. Characteristically, these youngsters do not have a stable place to live (16). We do not accurately know the magnitude of this problem, but, through indirect estimations, we have the impression that it is quite significant. CEMEF has initiated two rehabilitation and treatment programs whose main objective is to determine the epidemiological dynamics. Both programs are located within areas of high consumption and provide substitute homes for the young inhalers.

### **Treatment Program for Alcoholism and Drug Use**

Although our National Constitution acknowledged alcoholism as a serious public health problem as long ago as 1917 (35), there was not a corresponding concern reflected in a sanitary (health) program until quite recently. In 1973, our Sanitary Code was reviewed and it was established that the Ministry of Health and Assistance should design yearly programs of prevention and treatment (17) (41).

In early 1977, CEMEF and the Direction of Mental Health, the organization in charge of programs related to alcoholism, began to coordinate their efforts in an attempt to integrate alcoholism and drug dependence programs with those concerned with general mental health. In Mexico City, a network of community mental health centres is already in operation which includes specific programs on alcoholism and drug dependence.

The disease concept of alcoholism is still the most prevalent one in Mexico (13) (41) so the accent is on treatment, rehabilitation, and early detection. A pilot centre is being created in Mexico City for the study and treatment of alcoholics. Also, a program designed to provide help for alcoholics and their families has been recently inaugurated. But recently, we have begun to enlarge our perspective on alcoholism to include problem-related drinking (21) and per capita levels of consumption (4).

In the cities along the northern border of Mexico which have the worst heroin problems, heroin treatment programs have been implemented. One of the objectives is to conduct epidemiological research. Heroin abuse is a serious threat. We have only approximate estimations of its importance and we need hard data in order to enable us to reduce the problem.



## Programs with International Organizations

In Mexico, two events enhanced epidemiological research in the field of alcoholism: the seminar sponsored by the Pan American Sanitary Bureau at Viña del Mar, Chile, in 1960 (31), and a second one at San José, Costa Rica in 1966 (13).

As we have already mentioned, two joint research programs are being carried out in collaboration with WHO: "Community Responses to the Problems of Alcoholics" and "Disabilities caused by Alcohol-Related Problems." Up to now, our collaboration with international organizations has proved to be quite useful and we believe that closer cooperation will be of considerable value in our future work.

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**TABLE 1**

**PREVALENCE OF ALCOHOLISM IN  
SURVEYS DONE IN MEXICO  
(Population older than 15)**

Author	Year	Population & place	Rates per 1000 inhabitant
Cabildo et. al (11)	1958	Open population México, D. F.	8.5
Dirección Salud Mental SSA (20)	1960	Open population national sample	9.8
Cabildo et al (7)	1967	Bureaucratic population	12.3
Ayuso et al (2)	1968	Military popula- tion	7.0

**TABLE 2**

**PERCENTAGES OF ALCOHOL CONSUMPTION  
IN MEN OLDER THAN 15**

Operational Classification	Urban population M = 392 Cabildo (12)	Rural population M = 209 Maccoby (26)
Alcoholic or pathological drinkers	11.7%	14.4%
Excessive drinkers	12.5%	13.0%
Moderate	46.2%	52.0%
Abstemious	29.6%	16.0%
Total	100.0%	95.4%*

\* 4% was excluded because it referred to ex-alcoholics who are now abstemious.

**TABLE 3**

**PERCENTAGES OF ALCOHOLICS AND EXCESSIVE  
DRINKERS IN VARIOUS COUNTRIES OF LATIN AMERICA  
(Men older than 15)**

Author	Place	Alcoholics	Excessive drinker
Tarnopolsky (1972) et al (39)	Argentina	4.4%	12.2%
Azoubale et al (1967) (3)	Brazil	13.6%	17.0%
Horwitz et al (1967) (23)	Chile	11.2%	17.0%
Cabildo et al (1969) (12)	Mexico	11.7%	12.4%
Maccoby et al (1965) (26)	Mexico	14.4%	13.0%

**TABLE 4**

**DEATHS FROM HEPATIC CIRROSIS IN THE  
MEXICAN REPUBLIC, 1958-1967**

Year	Number of cases	Rate per 100,000 inhabitants
1958	7233	22.3
1959	7722	23.1
1960	7678	21.3
1961	7752	20.8
1962	7556	19.6
1963	7678	19.2
1964	7550	18.3
1965	8180	19.1
1966	8622	19.5
1967	9234	20.2

Source: General Direction of Statistics.

Elaborated by: Direction of Mental Health-Division of Biostatistics.

**TABLE 5**

**DEATH RATE FROM ALCOHOLISM AND ALCOHOLIC  
PSYCHOSES IN THE MEXICAN REPUBLIC  
1963-69**

Year	Total number of cases	Rate per 100,000 inhabitants
1963	1669	4.3
1964	1867	4.7
1965	1856	4.5
1966	1939	4.6
1967	2149	4.9
1968	2091	4.6
1969	2013	4.2
<b>TOTAL</b>	<b>11571</b>	<b>4.5</b>

Source: Direction of Biostatistics of the Ministry for Health & Assistance.

Elaborated by: General Direction of Mental Health-Division of Biostatistics.

**TABLE 6**

**PERCENTUAL DISTRIBUTION PER CAUSES OF TENTATIVE  
SUICIDE IN THE MEXICAN REPUBLIC, 1967.**

Causes	Number of cases	%
Family troubles	126	13.4
Severe illnesses	126	13.4
Love	77	8.2
Economic difficulties	53	5.6
Alcohol intoxication	40	4.0
Remorse	26	2.8
Intoxication from enervating drugs	10	1.1
Others	383	40.8

Note: Other causes and those unknown are eliminated by priority because there is no accuracy regarding decisive causes. The table includes tentative suicide in cases either consummated or frustrated.

Source: General Direction of Statistics.

Elaborated by: Direction of Mental Health-Division of Biostatistics.

**TABLE 7**

**PRODUCTION AND POSSIBLE CONSUMPTION OF ALCOHOLIC  
BEVERAGES IN THE MEXICAN REPUBLIC, 1968**

Product	Total Production	Average of consumption per capita (X) in liters.	
		Per year	Per month
Beer	1 197 148 000 Lt	48,778	4.064
Pulque	240 091 795 Lt	9,781	0.815
Tequila	25 256 104 Lt	1,029	0.086
Grape brandy	16 000 000 Lt	0,652	0.054
Common brandy	24 000 000 Lt	0,982	0.081
Non-distilled wines	2 000 000 Lt	0,081	0.007
<b>TOTAL</b>	<b>1 504 595 899 Lt</b>	<b>61,304</b>	<b>5.108</b>

(X) We eliminate 21,128,000 (46.2%) that correspond to the population younger than 15. Estimated population up to June 30, 1970: 45,671,000 (SIC)

Elaborated by: Direction of Mental Health

**TABLE 8**

**MEXICAN REPUBLIC—TAXES ON ALCOHOLIC BEVERAGES  
NET TAX COLLECTION (MILLIONS OF PESOS).**

YEAR	PULQUE	BEER	ALCOHOL
1968	42.9	259.2	65.6
1969	44.0	300.2	68.2
1970	42.3	314.1	69.3
1971	49.3	905.9	71.6
1972	53.3	1 206.0	92.8

Source: Direction of Income Tax. Ministry of the Treasure. 1973.



TABLE 9

PERCENTAGES OF USE OF DRUGS IN VARIOUS SURVEYS DONE  
AMONG STUDENT POPULATIONS IN MEXICO

Author	Type of school & place	Age	Size of Sample	Rate of consumption
Lafarga (1972) (25)	Private University D.F.	18-23	642	20% have used marihuana 0.7% have used hallucinogens
* Cabildo et al (1972) (10)	Preparatory & Vocational, Mexico, D.F.	18-18	497	17.5% have used marihuana, mushrooms, amphetamines.
De la Fuente 1972 (18)	National University of Mexico.	18-25	233	10.4% have used marihuana 10.7% solvents 1.2% hallucinogens
Carranza (1972) (14)	Secondary school	13-20	7800	15% some kind of drug
Wellish y Hay (1974) (42)	Secondary in Monterrey	15-18	229	Have used sometime marihuana 2.0% amphetamines 2.3% opiates or cocaine 0.9%
Castro et al (1975) (15) CEMEF	National sample Secondary & Preparatory	14-18	9900	Have used sometime marihuana 2.0% amphetamines 2.3% cocaine .34 heroin 1.0%

\* Done by interviewers. At the remaining surveys, self applicable questionnaires were used.

**TABLE 10**

PERCENTAGES OF PERSONS WHO HAVE USED DRUGS SOMETIME  
IN DIFFERENT CITIES OF THE MEXICAN REPUBLIC—HOUSEHOLD  
POPULATION OF BOTH SEXES, OLDER THAN 14.

	Mexico City* n=2733 1974	San Luis Potosi** n=624 1975	Puebla* n=668 1975	Monterrey*** n=248 1975	La Paz* n=444 1974
Marihuana	1.3%	2.1%	0.3%	1.5%	4.9%
Solvents	0.4%	0.5%	0.01%	1.2%	0.7%
Hallucinogens	0.3%	0.9%	—	—	1.1%
Heroin	0.1%	—	—	—	0.4%
Morphine					

\* Medina Mora M.E. (28)(29)

\*\* De la Parra, C.A. (32)

\*\*\* Natera R.G. (30)  
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## Remarks

# ALCOHOL AND DRUG-RELATED PROBLEMS

by Dr. Harold Kalant

Rather than attempt to summarize the presentations made by Drs. Wig, Amar,\* Anumonye, and Campillo-Serrano, I wish to draw certain points from the various presentations that I think may be of particular interest in the context of this discussion—points dealing with common aspects of the alcohol and drug problems encountered in different parts of the world, points of possible uniqueness or at least significant differences, and types of cooperative projects we might consider in the light of these common and distinctive features.

As far as the common points are concerned, I think all of the speakers in this session have made a point similar to that which recurred throughout the previous session: the relative lack of accurate uniform statistics. In that session, the reference was to the difficulties of obtaining accurate statistics on the levels of consumption. Now we have heard of a corresponding lack of accurate information on problems produced by alcohol and drug consumption.

The presentations, particularly that by Dr. Campillo-Serrano, indicate that the gathering of information on levels of use may be well in hand in many places where statistics on the health problems produced by such use are still much less adequate. With that proviso, and recognizing the reliance

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\* Dr. Amar's paper, entitled "Social Control as a Factor in Non-Medical Drug Use" is included in the section, *Control Strategies*.

that can often be placed on observations by experienced clinicians and other observers in different countries, I think one can extract from the descriptive features, rather than the statistical, certain common points which stand out quite clearly.

The first is that all speakers referred to very marked heterogeneity of patterns of use and of complications, much more marked perhaps than we are accustomed to finding in European and American societies; differences in patterns of use, in levels of use, and in complications, not only between countries but between regions within countries. Urban-rural differences are considerably more marked than we are accustomed to seeing here, as are differences according to socio-economic and educational strata within a society. Such variations make it perhaps risky to draw generalizations, in fact they may distort the pattern or invalidate the description of patterns of use and complications within even a single country.

The picture is complicated by the point that all speakers made about the role of rapidly progressing urbanization and industrialization and the impact that these make on traditional social controls. Dr. Amar spoke at considerable length about the importance of this and the theme was echoed in some of the other presentations. I rather like the term that Dr. Amar used of "democratization" of patterns of drug use. It perhaps puts a slightly different color or flavor on the change in patterns of use which we are otherwise accustomed to seeing in only negative terms.

The role of world communications, travel, and importation of habits, in establishing customs and values which are common to similar classes and educational groups in different countries, was again made very vividly. It calls to mind Renoir's film *La Grande Illusion*, and its lesson that equivalent groups in different countries may differ more from other groups in their own countries than from each other.

Striking examples were provided by Dr. Wig and Dr. Anumonye, of drug use by university students in their countries that closely resemble patterns of drug use common in Europe and North America. Potent medically-used drugs have gained wide entry into societies which do not yet have anywhere near the range of medical services and of personnel to supervise the use of these drugs in the approved medical manner. Consequently the agents themselves, and the legitimate international commerce that makes these agents available, favor the development of patterns of non-medical use that may far outstrip the legitimate medical use.

Age and sex differences were again mentioned by at least three of the speakers, together with the fact that the differences tend to disappear as traditional social structures weaken, and traditional controls over socially acceptable behavior with respect to alcohol and drugs fade. This is a common point not only in the countries represented by the speakers here but also in the countries of the so-called developed world. It raises some question, perhaps some interesting speculation, as to the degree to which sex



differences are based on biological factors and the degree to which they are based on universal social factors shared in one form or another by all cultures, regardless of otherwise striking differences.

The medical and psychiatric complications described for the various drugs have also been alluded to, and it is obvious that in qualitative aspects they are universal. The emphasis, for example, on cirrhosis and nutritional disturbances associated with the use of alcohol; the role of alcohol in automobile accidents and violence, whether self-inflicted or homicidal; the central nervous system disturbances produced by alcohol and sedative drugs; effects on work performance, loss of productivity, and of wages; the description of toxic psychoses produced by amphetamines and by hallucinogens; the cough, weight loss, and cognitive impairments that Dr. Wig mentioned in connection with chronic use of cannabis—all of these are obviously universal in quality, in kind, and presumably therefore reflect essentially pharmacological features of drug action which are independent of cultural or environmental differences that may in other senses modify the drug actions.

But this brings us perhaps to the limit of the common points that were stressed by the speakers and we begin now to run into a number of possible sources of difference.

Cultural aspects of, or cultural influences upon, diagnosis were mentioned. The degree of similarity or dissimilarity of concepts implied by the use of the same diagnostic terminology by clinicians or statisticians in different societies is perhaps an important matter in which to look for differences.

Dr. Péquignot mentioned in conversation this morning that in France one sees many cases of cirrhosis among drinkers who are not alcoholics. In contrast, in North America it is generally accepted that alcoholism is responsible for so high a proportion of cirrhosis that the death rate from cirrhosis provides an excellent index of the alcoholism rate. We agreed that this difference of concept raised the very important question of how one defines an alcoholic. How does one define dependence?

Among countries as diverse as Mexico, Nigeria, and India, the views may be very different indeed, and this may give rise to important differences in the impressions held in different countries concerning the magnitude of problems related to alcoholism. It would be interesting, in that sense, to compare Chile and Mexico, two countries with many social and cultural similarities but with an important difference related to alcohol. Chile is much more like France in terms of per capita alcohol consumption, of the social and economic role played by wine and wine-related beverages, and of the cultural definitions of normal drinking and alcoholism. Any difference between Mexico and Chile with respect to the relation between alcoholism and medical complications might rest on these cultural differences rather than on differences in pathological processes in the two countries.



Such possible conceptual differences may markedly influence the application of what on the surface appears to be standard terminology, and therefore may have a marked effect on the perception of the quantitative aspect of problems which qualitatively are seen to be similar. When, for example, are delirium tremens diagnosed? What does it take to apply the label to a patient in, let us say, rural Brazil as opposed to a clinic in New York City or somewhere in Europe. It struck me, as Dr. Amar was talking, that it would be fascinating to know whether the statistics indicate a marked increase in delirium tremens during the month of May in rural Brazil. Is the term applied to people who experience withdrawal reactions as a consequence of stopping their alcohol consumption for religious reasons, or is it applied only to patients who enter hospitals in large cities?

There may be, however, real differences based on mechanistic interactions of drugs with environmental factors. What is the role of age, for example, or of nutrition in the production of complications arising from what is otherwise the same pattern of alcohol or drug consumption? Dr. Campillo's paper, I believe, indicated that 11.5% of working class children under the age of 15 in Santiago were labeled excessive drinkers. How will this fact affect the incidence of alcoholic liver disease when they reach the age of 20 or 25 compared to the incidence in corresponding age groups in the countries in which the onset of consumption is generally later, and in which there is much less interaction with nutritional factors? Dr. Campillo did refer to the fact that the validity of the Jellinek constants was unproven for Mexico. The proportion of cirrhotics attributable to alcoholism there has not yet been separated from the influence of infection and of nutrition by direct field studies in Mexico, as had been originally done in Europe and North America for the setting up of the Jellinek constants in the first place. How does this influence quantitative aspects of the pictures that one draws from public health data?

The psychiatric problems may also differ in drug use under traditional patterns and under urban patterns which Dr. Amar described. Does the loss of the protective effect of support by traditional social patterns, and by communities which accept these patterns, alter appreciably the incidence of diagnosed psychiatric complications? One can't help thinking, in this context, of work done by Dr. Daley in the Foundation some years ago, on patterns of behavior under the influence of alcohol intoxication among North American Indians, specifically northwestern Ontario Indians. As a consequence of the incorporation of alcohol into a set of social behaviors which were changing rapidly under the influence of loss of their own culture, and incomplete acculturation of white society, these Indians had not only different norms of intoxicated behavior from those of the white population, but also different views on what constituted problem behavior. To what extent does this mean that equivalent patterns of drug use will have, as they extend and as urbanization proceeds, different severities or different frequencies of production of psychiatric complications among users?

A last point which is worth noting in terms of possible difference is the

economic factors which determine the impact of alcohol and drug use upon the society in which they occur. Dr. Anumonye and Dr. Campillo did refer, for example, to the importance of the sale of alcohol as a source of revenue for the government. If one looks at societies in which per capita health care expenditures are still considerably below those of European and American societies, while the attraction of increasing sources of revenue becomes increasingly strong—perhaps irresistible—is a government in such a society likely to have a very different picture of the balance of costs and benefits of the growth of alcohol or drug use? When the expectations of the society, when the level of demand for services by the population, is still well below what one encounters in other societies in which provision of universal health care is seen as a right of the citizens and is demanded of government, will governments see the advantages of increased revenue as far outweighing the possible risks of increased health care costs? And will this in turn affect the spread of alcohol and drug problems in a way in which citizens of other countries might not anticipate from their own experience?

One thinks also of the effect of alcohol on road accidents and the very different figures which Dr. Campillo cited, compared to those cited from Europe and North America at the 6th International Conference on Alcohol, Drugs, and Traffic Safety held in Toronto in 1974. One of the speakers at that conference pointed out that alcoholism and alcohol consumption throughout the world did not go parallel with the role of alcohol in motor vehicle accidents, or the economic costs of these accidents, for the simple reason that in many of the countries in which alcoholism was already a serious problem, the economic situation precluded a widespread impact on driving. Major differences in the numbers of vehicles in use, and the social class distribution of people who use the vehicles, did not permit a strict correlation across all countries. This, too, may influence the judgment of different governments concerning the balance of costs and effects of the pattern and levels of use.

The last subject that I would like to mention very briefly is that of possible areas of international cooperation growing out of the pictures which have been presented this afternoon. The first and most obvious requirement that all speakers have talked about, and an obvious area for international cooperation, is an attempt to define accurately both the qualitative and quantitative aspects of alcohol and drug use and of the medical and social problems created by them. In other words, an attempt shall be made to standardize nomenclature, to come to some agreement on the applicability of different terms, and to devise methods of gathering data which, as the speakers in the earlier session pointed out, are not dependent on governmental statistics of uneven quality and reliability. An attempt to define more limited observer-type or informant-type statistics might give at least preliminary pictures of the kinds and numbers of alcohol and drug-produced problems, that could be compared reliably from one country to another.

A second area which lends itself for international cooperative study is

that of factors which modify pathogenetic processes. For example, beginning with the concept of dependence itself, a comparative study of the etiology of dependence—as distinct from the etiology of, or factors contributing to drug use—might contribute a great deal to understanding of the problem not only in Third World countries but in the so-called developed countries as well. Dr. Anumonye referred, during this morning's discussion period, to the role of drinking to drown sorrows. Dr. Amar referred to the growth of hedonism as lifestyle and value system change with increasing urbanism and a loss of traditional values in Latin American countries. These concepts are of course not unique to countries in Asia, in Africa, in Latin America. They are found in a great deal of literature from Europe and North America, among many reasons which are advanced as possible causes of drug dependence. Yet, one has to recognize that scientific observation of patients, and experimental studies of drug dependence which have become increasingly common in North America in recent years, cast a great deal of doubt on the universal validity of such concepts in the generation of drug dependence defined in operational behavioral terms.

Nancy Mello, for example, has written of the lack of validity of such a concept as a universally valid description or explanation of the development of dependence, or of self-administration of alcohol and other drugs when seen as a model of reinforced behavior. She has drawn attention to the *increased* distress and anxiety levels provoked by drug use, and Dr. Cappell has reviewed the shortcomings of anxiety reduction as an explanation of alcohol and drug use. The scientific examination of the generation of behavior patterns based on drug self-administration has shown clearly the need for a much broader definition of the etiological factors in the development of dependence. A cross-cultural cooperative study would be very useful indeed in attempting to describe, even in qualitative terms, on the basis of large numbers of individual case studies those factors which appear to provide the motivation or the reinforcement for drug use. One could then draw conceptual models of etiology that would be independent of cultural preconceptions.

In more medical terms, the role of environmental factors and pathogenetic processes of the complications of alcohol and drug use would also be, I think, an extremely useful area for international cooperation. It has been known for many years that the patterns of liver cirrhosis in southern and central Africa differ from those in France and Chile, and differ again in varying degrees from those in North America, to the extent that factors other than alcohol *per se* may contribute to the process. This, I think, could be better defined by broader reference to more cultures, more parts of the world, more social and economic situations than have been examined closely to date.

The role of social controls in the determination of drug-altered behavior, alluded to by Dr. Wig, is another matter which could be greatly clarified by cross-cultural comparisons among countries in which the same drug is widely



used, and apparently with different behavioral consequences. The extent to which cannabis is associated with violence, with sociability, with withdrawal, or with tranquility in different societies is an obvious example of a question which could be investigated usefully in this way.

A closely related benefit would be the ability to separate, by such comparisons, the clinical consequences of chronic drug use from consequences of the lifestyles of the users. There have already been a number of widely publicized studies of this type. The Jamaican study, the Greek study, and the Costa Rican study of effects of chronic cannabis use have been criticized for many faulty points of technique. But the fact remains that this type of study, done on a suitably large scale and with perhaps better defined criteria for selection of subjects, with long-term observations carried out over years and across populations, probably provides the best method that one can envisage at present for separating drug effects from those of associated, but not obligatorily associated, patterns of life.

Such knowledge would be extremely important in the effective utilization of cultural influences in the development of prevention and treatment measures and social policies regulating the use of drugs.

Finally, there are at least two points of quite practical importance that suggest useful areas of cooperative research. The first involves cooperative analytical projects for actually measuring the active ingredients of drugs as they are actually consumed in different countries. At present, the statistics or the descriptive data include measures as ill-defined as "numbers of drinks," which as Dr. Anumonye pointed out could include even non-alcoholic drinks. Preparations may vary as widely in potency as *charas*, Jamaican marihuana, North American marihuana, and hashish from Lebanon, and so on. It is obvious that without a constant monitoring of analytical data on the preparations which are actually used, there can be no comparability of effects seen with different stated levels of use. And therefore some of the conclusions which are drawn, probably unjustifiably, about the non-comparability of drug-related experiences in different countries may merely reflect a lack of uniformity of dose-response relations in different countries.

A study of the equivalences of different drugs in terms of their pharmacologically active constituents, and the actual physiological or pharmacological effects produced by known doses, would help to establish the equivalence of such pictures as the use of consequences of *khat*, for example, in the Middle East and the use of consequences of amphetamine in other parts of the world. This would enable us to establish what is common across categories of drugs, as distinct from unique effects determined by the cultures in which otherwise-equivalent drugs occur. This in turn would probably help to clarify much of the uncertainty that exists about the usefulness of information transfer from one culture to another.

The other practical point is the question of economic aspects of treatment. The question of out-patient versus in-patient care, for example; the question of care systems based on para-medical personnel versus those

based on specially trained medical personnel; the validity of community-based versus specialty or specialist-based treatment services. All of these, in terms of evaluation of cost-effectiveness, would have far more meaning in terms of the applicability of conclusions to new societies if they were done as part of cooperative projects in different countries and different societies. Only such comparisons would help to sort out what are the truly effective ingredients of any treatment procedure, that are independent of the degree of economic development that a country can afford. To what extent, for example, can community-based treatment procedures meet the same needs as highly expensive specialist-based treatment procedures and institution-based treatment programs? This, one can determine from societies where the population does not expect and demand that all treatment be given by highly paid specialists in extremely costly institutions. In this sense the so-called developed world may gain at least as much as the developing countries through exploration of more economical means of providing the same treatment ends.



## **Control Strategies**



# SOCIAL CONTROL AS A FACTOR IN NON-MEDICAL DRUG USE

by Dr. Ayush Morad Amar

The purpose of this paper is the study of social controls with respect to the use of drugs and alcoholism in South American communities (1). We will approach the subject from two basic initial propositions. On one hand, we will consider the study of social control as an integral part in the study of collective behavior in urban communities with their several forms of deviation and divergence. On the other hand, we will consider the use of drugs and alcoholism as relevant to the study of public health and its forms of maladjustment.

The first approach leads to the more generalized issues regarding the nature of existing social controls, above all in South American cities; their degree of efficiency or inefficiency in the way they influence individual conduct and collective behavior; the forms of internal differences of the studied societies; and issues related to alcoholism and the use of drugs. In this paper, we understand social controls to be a combination of actions and social instruments which—tending to establish a certain conformity between character and social structure, between culture and society—guarantee the maintenance of order. In this way they doubly affect individual and collective behavior: by the demand of consent and by coercion, that is by applying sanction. For the purposes of this study it was convenient to distinguish formal social controls from informal social controls, presuming that between them there exists an unequal rhythm of

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efficiency. It is a distinction which obeys analytic and operational sources, although this distinction has no phenomenological origin.

The second approach considers more pertinent issues regarding both the traditional use and urban pharmaco-dependence of alcohol, the high usage of which leads to public health problems for the communities which constitute the South American continent. In this study plan, these approaches are usually found interwoven, in spite of the fact that we sometimes rely on one, and sometimes on the other. We do not intend to deeply explore the aspects under consideration nor to exhaust the subject, but we hope to point out some directions.

### **The Urban Personality and Collective Behavior**

Since the Industrial Revolution, societies have become accustomed to a changed rhythm of development, operating in different ways with regard to the various positions of social life. Economic production involving the use of technology and mass production—producing more in less time—provoked profound changes in the societal plan. On this level, new structures of thinking and new social institutions were introduced.

The acquisitions obtained by applied science—involving a new knowledge—associated with the possibility of mechanical investigation of the kind of energy existing, offered mankind a new rhythm of living and psychosocial conditioning. This quick process of social transformation—involving its technical, cultural, and psychological aspects—submitted the solution of problems and the facing of new situations to the domination of a technical thought that altered the cultural horizons of these communities. These transformations affected not only the global plan of society but also—and above all—determined new stimuli affecting the human psyche. Other than this, they encouraged the formation of a personality—hedonist—whose fundamental traces rely on the delimitation of a new morality and of new patterns of perception of time and space. Thus, greater manifestation of human instincts is acknowledged, aggravated by a greater consciousness of individuality and aggressiveness, both of which are opposed to the social conformity demands one is confronted with in living conditions offered by the standard of civilization of one's society. Toffler (2) created the term "future shock" to "refer to changes which occur in the mental health of individuals who are being submitted to an accelerated rhythm of change in our society." In other words, people are obliged to manipulate the information at a much greater rhythm than that required in societies with slower development. The clamorous current of changes in which we are involved is so powerful that they overthrow institutions, change our values, and uproot our origins. The change is the phenomenon through which the future reaches our adapted responses.

Although most of these transformations have been centralized in societies with a high level of technological development, South American

communities—in a process of transition—have also been affected. The industrial societies which were established in South America, while bringing along a typical urban style of life, also brought about new sociability patterns. “No longer ‘informal’ sociability learned by living in that community, learned collectively, but a sociability imposed by television and by the positions that the individual occupies in society. The street is no longer a meeting place and people are lost in an agglomerated crowd” (3).

In general, streets in South American cities have always served as common meeting places. In the case of São Paulo the “...street had an immense importance in the daily activity of its inhabitants, mainly in the 19th century. The street was where the various social groups that made up the society met. This was where they learned to be sociable. With the demographic increase that has been established since 1920, the fundamentals of that community vanished, confronted with new values. And the new values are those of work, of pragmatism and reasonableness” (4). As happened in São Paulo, other South American cities are forced to create new meeting places, new ways of sociability.

Typical aspects of the urban way of living can be described in terms of the “substitution of primary contacts for secondary ones, in the weakening of family ties, in the decline of the social meaning of the family, in the disappearance of the neighborhood and in the wearing out of the traditional basis of social solidarity” (5). In this context, problems such as the preservation of health, methods to ease suffering related to social and personal insecurity, steps that tend to diminish the effects of absence of recreation and leisure on the mental health of the population are included.

The maladjustments that are produced in the plan of urban life, a result of the incidence of these transformations concerning collective behavior, can be contrasted to the intensity of judicial precept as a form of control and a way of overcoming emerging conflicts. Problems such as poverty, suicide, delinquency, crime, prostitution, alcoholism, and the use of drugs, among others, replace the contrast between the “sociological phenomenon and the prevention and control of deviant behavior that fall within the limits of the conduct judicially condemned” (6).

It is exactly in the planning of the types of social control that the problems and fundamental issues of judicial precept are postulated. Bergalli (7) points out that coordination and solidarity demand the overcoming of social maladjustments, the molding of cultural patterns for the community and easing of conflict of divergent social values. All this claims the existence of efficient forms of social control.

In urban life planning of the typical collective behavior in South American cities, and of the new personality pattern which is being formed, the existing forms of social control regarding the maintenance of public health involve not only preventive aspects such as sanitation and epidemic combat, but also the control of attitudes regarding the use of medicine and



abuse of alcohol. These problems are becoming substantially more grave from the public health point of view, creating the necessity for broad-scooped and efficient formal and informal controls over alcoholism and traditional and urban pharmacodependencies.

### **The Problem of Pharmacodependencies**

Besides socially marginal conditions, poverty, underemployment, and crime, the problems of public health require the adoption of rational steps in the area of medical-sanitary assistance, especially if we consider the low levels of health of the urban worker as well as the ways in which he was recruited, characterized by continuous migration of ample rural population contingents. As usual, state participation in the problems of public health in South American communities has almost always been restricted to the area of social welfare and to the combating of infectious and contagious epidemics. The spreading of these kinds of disease required development of educational programs aimed at instructing large populations whose responses to the program varied from an extreme negative reaction to the introduction of preventive and prudent programs to acceptance of such steps, with the help of the campaigns developed for that purpose. Typical examples of these varied responses were, on one hand, violent reactions of the population against a vaccination program which was begun in the early 20th century in Rio de Janeiro, and, on the other hand, the almost total attendance of parts of the urban population at recent vaccination campaigns against poliomyelitis, meningitis and other contagious diseases.

The present scene of public health measures, traditionally indicated by the sanitation of the environment and epidemic combat, has already started to show signs of modification at a rate in which the existing problems in this area of social life are being altered and becoming more complex. For example, considering the extent to which mental insanity problems are appearing, notably in some South American countries, debates and discussions are aroused. Their effects tend, almost necessarily, to promote alterations in sanitary-assistance policies of a preventive nature. Within these debates, recent investigations and studies point out the role of the use and abuse of medicines and alcohol, the origin of some of the gravest problems of public health. Regarding this, it is necessary to note that the introduction of adequate policies of deliberate control of the situation depends on the knowledge we have concerning their origins and manifestations.

We may affirm, as an initial assumption, that not only the "dependent" consumption of psychoactive substances and alcohol but also the occasional consumption may cause important and serious problems of public health. We consider that, in general, these problems surpass the existing official statistics. In this study we seek to establish a form of analysis that relates aspects of the South American sociological scene with the scene of drinking

habits and the consumption of psychoactive substances within the population.

It is necessary to state that besides the problem of alcoholism, for some authors, the most serious problem to public health in South American communities is the abuse of drugs other than alcohol which require a specific type of examination in light of the South American context of production and consumption, as well as the deep-rooted habits both traditional and recently acquired by the population, be it rural or urban. In this sense, we might affirm that three profoundly different types of drug-consumption habits are apparent in communities that make up the South American continent. They constitute: 1. the consumption of alcohol; 2. traditional pharmacodependencies, and 3. urban pharmacodependencies. The first two types of drug-consumption habits are deep-rooted in the traditional customs and habits of the native rural population. Still, in the case of alcohol, we deal with types of consumption which are generalized, be it in rural or urban zones, and which also have a folkloric aspect. The third and last type of consumption includes pharmaceutical products and drugs of illegal international trade, whose overuse has been observed especially in big urban cities.

In the case of alcoholism, important investigations point out the role of traditional habits and of habits acquired recently in an atmosphere of tolerance. With reference to traditional habits, the South American ethnic scene demonstrates a social and historic pattern, as well as a level of cultural development, of habitually consuming alcoholic drinks. It is important to note that the South American ethnic scene is marked by conflicting racial relations, partly due to the heterogeneous population, comprised of an indigenous population, a mixed (e.g. mulatto) population as well as blacks and whites, all often living in close proximity, and also due to the impact of the Hispanic-Portuguese conquest and colonization. In spite of this impact, a nucleus of the indigenous population has remained intact, be it because of solidarity ties or a peculiar political organization. In general, these populations are concentrated in Peru, Bolivia, and Equador; maintaining in some regions their language, customs, and religious practices as well as enjoying their own political and economic leadership.

Because of the presence of indigenous or mixed races in various countries of South America there has been a marked cultural tolerance for the use of alcohol. In religious and witchcraft practices, and in indigenous rituals, the taking of drugs has always been characterized as part of the sessions of magic and mystery. In general, certain types of homemade and artificially produced drinks have been part of the festivities and celebrations of the native population, especially of the Andean countries. As an example of the cultural impact on the habitual consumption of alcoholic drinks, the stories of indigenous populations of Central Brazil using *cauim* (an intoxicating drink) are present in numerous myths and legends.

In the South American scene, another large ethnic contingent consists

of blacks, concentrated predominantly in Brazil but scattered also in Ecuador and Venezuela. The black immigration was, of course, promoted by the slaver organizations. With the suppression of slave labor, there were effects not only on racial relationships but also on the process of the formation of an urban-industrial society and on the formation of the social relationship pattern. The production of sugar-cane provided the black population with the possibilities of producing cane spirit, which soon spread out among the slave and free population. First, the escape of slaves and, later, their liberation had, among others, the effect of spreading and mixing habits and customs of that population with the habits and customs of the poor, white, and mulatto populations. That is how the consumption of cane spirit soon became characterized as typical of the "backwoods" population and, more recently, of immigrants from northeastern Brazil to the south and central-south regions.

Still to be considered as an equally significant aspect of the problem is the white immigration to South America between 1880-1930. Due to the scarcity of manual labor—provoked by the suppression of slave labor—a migration and colonizing policy resulted which sought to attract a spontaneous flow of colonists. This flow included especially Italians, Portuguese, Spaniards, Germans, Slavs, and Poles. They migrated mainly to some regions of Argentina, Chile, Uruguay, and the south of Brazil and brought with them their traditional habits of consuming alcoholic drinks, encouraging, in their way, the development of alcoholism.

The ethnic scene, briefly described, occurred not only in the racial relationship plan, but also in spatial occupation. Although spatial occupation is usually characterized by predominancy and concentration in certain areas by specific ethnic types, the group of South American communities are characterized by the phenomenon of the crossing of races. Nevertheless, the progress of a capitalist economy in South American societies is accompanied by the process of Aryanization, resulting from the increase of the white contingent as much as from the interracial crossing between the white and black and white and mulatto. This pattern of spatial occupation, brought about by concrete historical conditions, had a significant impact on the production of alcoholic drinks. In countries where white immigration predominated, important wine and liquor industries were set up (Uruguay, Argentina, Chile). The Brazilian cane spirit industry also gained fame.

It is important to emphasize that the change in ethnic structure of South American communities produced considerable effects on the configuration of new human contingents. On one hand they became more complex culturally, demographically, and societally and, on the other hand, specific patterns were produced, as in the case of integration of various ethnic groups in the formation of social classes, a true case of cultural-adaptation process. An example is seen in a recent propaganda slogan of a traditional Brazilian cane spirit industry referring to the position of the lower classes of the population, relative to social stratification, as to the lack of discrimination



among social groups and classes concerning drinking habits and type of alcoholic drinks: "The rich also drink cane spirit!"

We also have to point out that in the urban centres and industrialized zones, we find a high and significant level of tolerance, relative to the abuse of alcohol, when compared with the registered index of rural zones. The fact is significant and is inserted in the plan of distribution of work between country and city. A topic not sufficiently discussed is the one related to the relationship between town and country. All those who have studied or tried to think about how the capitalist communities were formed in the European continent regard the town as an important focus of attraction of rural manual labor, provoking, as one of its most visible consequences, a division of labor between city and country. The history of this division of labor, in the case of South America was, as you may say, reconstructed. How can we explain the formation of South American cities, embedded in the agrarian economy of exportation and in a vast mercantile colonial empire? Under what conditions did commerce and urban workmanship develop and how did a group of men appear to fill these roles? Several authors have emphasized the role of the disorganization of the community economy and of the workmanship system in the post-colonialist period in the configuration of the so-called "urban marginal condition" phenomenon, whose association with poverty, low conditions of health, habitation and nutrition, would be associated with problems of social disorganization and to alcoholism. As Bergalli points out: "Alcoholism is another area in which important changes of social controls in communities, which improve rapidly, are advised. The great complexity of modern communities and the high level of specialization that their members reach in their respective activities, has an important connection with the use of alcohol. Although in many Latin American countries, above all the Andean, this habit plays an important role substituting for food, medicines, and having a religious value, nowadays with the urbanization that has spread to isolated places, alcoholism has other influences and is more destructive. For example, the depressive action of alcohol becomes more significant as it joins the needs that human beings are submitted to due to social complexity" (8).

In addition, the development conditions of the South American cities, taking as examples, Buenos Aires and São Paulo, have had the effect of introducing into the urban environment an unstable, poor, disorganized, population badly prepared for any activity and living in social conditions that create deviant behavior. It is in this way that Alice Parizeau calls attention to the elements, which, to her understanding, cause alcoholism: poverty, promiscuity, economic insecurity, social instability of the family base, temporary or lasting personality difficulties, search for a temporary way out—a way of forgetting daily realities, a way of making social contacts easier—and a stimulant for some artistic tendencies (9). It is alcoholism which, in this case, is considered in South America a real social sickness, not only because of its chronic aspects, but also because of the high level of

tolerance and permissiveness that characterizes it, be it in rural or urban zones.

Consumption of other drugs also has a remarkable existence in South American communities. Regarding this, it was found, through studies and research, that an important segment of the South American population—notably countrymen, rural and indigenous workers—maintain traditional customs which involve the use of psychoactive substances, especially hallucinogenic substances. If the number of people involved in this type of consumption and the registered index of frequency are to be considered, it would not be an exaggeration to affirm that these traditional habits and customs form patterns of public health problems that deserve priority in control policy and preventive programs.

We also have to observe that besides these traditional customs and habits, during the last years—above all, since the 1960s—the so-called urban pharmacodependence, that is the consumption of pharmaceutical products and drugs included in the international traffic, has acquired importance in the plan of South American cities. Although, for the South American countries, the characteristics of the problem fluctuate by country—due partly to the fact that some countries are characterized as drug producers (as is the case of Bolivia), others as traffic or transition zones (as it has been the case of Paraguay), and others as consumers (as in the case of Argentina and Brazil), and also in part to the type of drugs that are produced and consumed—we still notice some epidemiological tendencies which characterize a specific situation in South America. These epidemiological tendencies that have been substantiated in the last decades are included in the total context of the rapid social transformation taking place in South American communities, as the verified processes of industrialization and urbanization have had, as a rule, an effect on public health and a sort of democratization of the admissible use of medicine and of drug addiction in a general way.

Industrialization, diversifying the employment structure, through the formation of ample layers of urban workers, specialized or not, has had an intense impact on South American communities' social structures—as in the case of Argentina and Brazil, especially on what is referred to as human relationships, the family and the behavior of people. In addition to the impact on the agrarian exportation economy and on social institutions, there has been an impact on racial relationships and, as mentioned previously, on family relationships. The social and economic development, tried out in a general way by South American communities and which included a rupture of traditional order in a colonial world, promoted the interruption of a patrimonial pattern of social relationship. In this way, the traditional family ties—which in Brazil included the basis for social promotion and personal identification—are weak, and, in the same way, other essential informal relationships such as compaternity have weakened.

Industrialization also proceeded in a way to change relationship patterns



and the structure of the traditional family group. The authoritative symbol of *pater familias*—which in South American communities had all the power, prestige, and authority, joining the internal division of characters—gave way to the stress of social origin. The extreme diffusion of new patterns of behavior create new behavior expectations, extremely increasing the cultural distance that separates children from their parents. We also have to observe that this process was usually followed by the conveyance of paternal authority to the command of community.

Another decisive phenomenon of the epidemiological tendency of using and abusing drugs in South American communities concerns the peculiar urbanization process that takes place in these communities which is often understood as an effect of the industrialization process. Such an assertion is not always true. Research on this subject has shown that urbanization operates in economically advanced regions as much as in the backward ones. Many South American examples have shown that the cities grow practically independent of the existence of industries in these cities. Effects provoked by changes in the rural economy, a product of the transformation of the economic system as a whole, associated with other elements such as the diffusion of the means of mass communication, increasing the mobility of population, and weakening of the patrimonial relationship, that is, that group of factors which are included in the plan of “demonstration effects,” act in a way to promote the concentration of the population in urban surroundings.

The urban concentration of the population, in altering the pre-existent models of development of South American cities, forced the development of a new culture, which reveals a new type of personality, profoundly hedonist, i.e. a class of men who have a peculiar way of facing the world and their relationship with their like. This new personality appears as the synthesis of a new sexual morality, of a new psychological schematism, of new patterns of fertility, of religious conscience, of prejudice, of stereotypes, and of myths and utopianism. Hereby, in South American communities—above all, in those with rural predominance—hermetism, affection entailment, and the concrete thinking of the countryman contrast with the emotional neutrality and the capacity of abstract thinking typical of urban surroundings. Actually, all this prosperity of the urban culture points out the most significant aspect which is subject to these transformations: it refers to effects that it has on the traditional social controls, be it formal or informal.

The urbanization, understood as a complex process of expansion and modification of ecological demographic characteristics of the community, consequently producing changes in social relationships and of which the most apparent symptom is the increase of the urban section of the total population, stimulates a reinterpretation in the cultural plan of what the community is and what social life is. The former mechanisms that used to promote a degree of agreement between social structure and character—and in other words, between society and culture—are now improper because

they provoke scant acceptance of the traditional cultural patterns and, in the same way, provoke a divergent understanding of the new cultural role.

For the great number of civilizations and social groups, the problem of public health—here including those related to the use of psychoactive substances—in South American communities deserve the highest priority in the elaboration of preventive programs and in the formulation of policies which are inclined to control the normal pattern of sanity. No matter in which way the use and abuse of drugs and alcoholism is being understood, in South America the introduction of an efficient mechanism of control and deliberate interference in the existing problematic situation require studies and investigation about social controls, of formal or informal origin or nature, that usually have effects on alcoholism, folkloric pharmacodependence, and urban pharmacodependencies.

### **Social Controls: Introductory Notes**

According to Mannheim, "...each society has a different system of control or at least emphasizes different controls which can be manipulated from different key points" (10). Different types of control are the customs, habits, way of life, religious practices, traditions, social conventions, laws, educational programs, and others. As has been said, control relates to social processes which function in double and simultaneous dimensions: by the demands of consensus and by coercion. Becker affirms that "...social controls affect individual behavior, in the first place, by the use of power, and by applying sanction. The behavior positively appreciated is rewarded, while the negatively appreciated is punished. It would be difficult to keep control if it were always necessary to fall back upon imposition, consequently other more subtle mechanisms, which have the same functions, appear" (11). In the case of South American communities, forms of social control such as the traditional distinction of work between men and women, the presence of the Catholic Church, interracial contracts, and the character and nature of the law are to be considered.

In reality, we find that coercion and consensus are demands that can be formulated in terms of objectives, means, and ends, as much as in predominant moral terms. There are, within this perspective, different types of rationality which accurately try to foresee incidents in social life considered to be maladjustments. In this study plan, formal and informal social controls are included.

What distinguishes formal social controls (12) from other types of control are their universal abstract and institutionalized character. The objectives are understood as universal in a certain community and applied with the same degree of imposition and sanction, independent of group, class, ethnic aspect, or social differences. In the case of the rights and the law, these controls—different from preventive and educational programs—appear as conciliatory mechanisms between groups and situations. Their institutionalized character derives from the fact that they are elaborated and

formulated by formal mechanisms, such as the legislative body, the executive body, and councils. In the public health aspect, measures deriving from organizations such as CO.NA.TO.N. (*Comisión Nacional de Toxicomanías y Narcóticos*) from Argentina and the Vigilance Committee of Narcotics of Costa Rica are examples.

In the specific case of law, questions have been raised about its efficiency as a means of social control. The impact caused by the difference between social rules and values raises, as an unavoidable consequence, the disagreement between penal law and the reality of a resolute community. "The lack of effectiveness and performance of law can be illustrated by the increase of the incidence of crimes, delinquency, and other important social problems such as recidivism, alcoholism, drug dependence, abuse in the use of medical substances, suicide, violence, and mental sickness" (13).

With regard to pharmacodependence, it is observed that as a typical characteristic formal social controls have been actualized in social reality in three ways; in treatment, in prevention and in repression. Treatment, ideally, is a form of formal control whose purpose consists in "correcting individuals," removing them from the sphere of "abnormality" to the sphere of "normality." The execution of the penalty applied to those who take drugs, as well as to swindlers, and the practice of prophylactic therapy are examples of treatment.

In the case of prevention, the purpose of this control is the prevention of abnormal patterns of public health. In this way, the educational programs are designed not only to create hygienic habits in the population, but also to modify permissive and tolerant attitudes toward the abuse of alcohol and non-medical drug use. Regarding this we see "...the efficiency of educational programs, however, has not been adequately considered. The preliminary considerations indicate a reduction of some types of behavior regarding the use of drugs and in some cases, a reduction or coincident ceasing of the use of drugs. Education does not have an immediate effect; it does not act as an injection. Nevertheless, education about drugs that takes into account the existing information about learning, motivation, growth and development, communication, deviant and destructive behavior, and cultural anthropology gives, in general, the desired results. It has to be tried and tested in various environments and with different types of groups, though we cannot expect that it exercises favorable influence upon the behavior of all those whom we intend getting to, especially those who already suffer problems regarding dependence" (14).

Repression, the ultimate finality as a form of formal social control, is used to prevent or reduce the availability of drugs through a program of action that relies on the inspection of the cultivation, production, manufacture, and distribution of drugs of licit or illicit use. Included here are the police actions and the procedures of justice, the intensity and character of which usually vary according to the type of drug and according to the geographical region. This aspect is important, above all, if the South



American characteristics of production, manufacture, distribution, and consumption of alcohol and certain drugs is considered. An interesting example of the efficiency of this form of social control is described by Becker: "In our country (the United States of America), numerous and powerful forces act to control the use of marihuana. The use of marihuana is illegal and can be sanctioned by severe penalties. Its being illegal makes the access to it difficult, putting immediate obstacles in the way of any person who would like to use it. The very use can be dangerous, since it is always possible that its consequence will be imprisonment and confinement" (15).

Together, these three aspects (treatment, prevention, and repression) control the availability of the product, the treatment and rehabilitation of the person who uses it, and the control of the use and abuse of drugs. We see that: "...the laws and regulations can have the following objectives: limit the availability of drugs that cause dependence; authorize or promote the organization of treatment services, of corrections, and of repression; establish the compulsory treatment of people who take dependence-causing drugs in a destructive and illicit way; punish people for the use of drugs or for actions related to this use (for example, transporting of drugs or their sale, even in small quantities); sanction or submit individuals who dedicate themselves to the traffic of drugs to quarantine; and dissuade others from the consumption or sale of these products" (16). We have to observe, however, that the rationality and logic of the formal social controls consist in the concrete efficiency of them and their implementation acts upon the consequences of drug use and not upon its causes or origins. It is exactly in this way that Bergalli points out: "It sometimes happens that the social control and, more concretely, that which consists of judicial ways and forms tend to eliminate consequences, including symptoms, without, however, facing decisively its causes and those other elements that in some way are in its origin. This even has a self-defeating effect in that when the symptomatic type of manifestations appear, it actually distorts the mechanisms that in another situation would have worked more smoothly and naturally in the social sphere. In such a way, when regarding law as a form of social control where it cannot be separated from other types of control (control by suggestion, or publicity, by faith, by social ideas, by simple force) neither is the type of organization and political life that the community adopts" (17).

Informal social controls operate simultaneously with the functioning of formal social controls (18). Informal social controls are distinguished from other forms of control because their area of action is concerned with societal morality. In social reality, these types of controls become concrete through attitudes oriented by a conscious belief (19) in ethical, aesthetic, religious, or any other value, whose effect consists of repressing or reinforcing certain forms of behavior taken as desirable or undesirable from the prevailing social and political point of view in a given community. A typical example of this form of control is represented by the moral career of stigmatized categories of persons. Regarding this, interesting information is offered by



Goffman (20) about the moral career of the mentally ill and the ambiguity of the institutions in control of the social identity of these persons.

In a general way, morally toned conceptions affect the use of drugs and the person who uses them, e.g. the stereotypes of the ruined alcoholic or of the addict to hallucinogenic substances. Becker's observation is appropriate in this case: "Conventional notions of morality are another means through which marihuana use is controlled. The basic moral imperatives that operate here are those which require the individual to be responsible for his own welfare, and to be able to control his behavior rationally. The stereotype of the dope fiend portrays a person who violates these imperatives. The person that takes such a stereotype seriously is presented with an obstacle to drug use. He will not begin, maintain, or increase his use of marihuana unless he can neutralize his sensitivity to this stereotype by accepting an alternative view of this practice. Otherwise he will, as would most members of the society, condemn himself as a deviant outsider" (21).

Therefore, it is significant to observe that the legitimacy of this form of social control rests on its non-institutionalized character as much as on its ethical nature. In this way, the configuration of attitudes toward and images of the person who uses drugs is affected by the informal social controls which operate, above all, in the patterns of consumption, imposing significant limits which promote favorable or unfavorable, positive or negative attitudes relative to this phenomenon.

### **Social Controls and Alcoholism**

Objective indicators of social pathology—such as percentage of individuals of the population who depend on the use of alcohol, death rate, morbidity, invalidity, unemployment, cost of services, among others—seem to indicate that alcoholism is one of the most serious problems of public health in South American communities. Currently, the consumption of alcoholic beverages include all types of products, ranging from folkloric products, clandestine distillation or contraband and illegal consumption, and also products that come from the official market.

Juan Carlos Negrete calls attention to the results of important studies, based on a sample of the Latin American population, which indicated: the alcoholism rates are higher in the lower classes of the population; the death rates caused by the abuse of alcohol, observed in some countries of Latin America, are among the highest in the world; the high incidence of violent deaths correspond, in Latin America, to higher figures of alcoholic consumption and hepatic cirrhosis, especially in Argentina and Chile (22). The problem of alcohol abuse in South American communities, which effects the normal pattern of public health, is not a recent phenomenon and it is more complex when the historical origins are examined. At indigenous ceremonies, even before the arrival of the European colonizers, the use of alcoholic beverages was a common practice. In this manner, cultural and

folkloric aspects have always exercised an influencing pressure on the drinking habits and customs in the region. Usually the drink was domestically and artificially produced, as with *cauim* (Brazil), *aloya* (Argentina), and *chicha* (Andean countries). Considering these historical limits, it can be said that the habit of consuming alcohol, not only concerning quantity or volume consumed but also concerning the type of drink and the way of drinking, has been tolerated in South American communities for a long time. Therefore, an investigation of which types of social controls act in this situation as modifiers of the consumption patterns of that drug and with what degree of efficiency should be carried out.

As was mentioned previously, formal social controls generally operate in three dimensions: prevention, treatment, and repression. With regard to prevention, the aspects to be considered refer to the production of alcoholic beverages. In the South American countries the production of alcohol is legal and controlled, while the impact of clandestine production has had relatively little official attention although it competes with the official market. And, in this respect, "the control of the distilled drink production by the state monopoly could not lower the consumption (of alcohol) in Uruguay and Costa Rica. Another important preventive aspect that is being neglected in Latin America is the quality control of the alcohol production. This aspect is relevant because of its significance to public health, as alcohol is a cause of intoxication and poisoning" (23). These figures usually demonstrate the low efficiency of prevention as a form of formal control in the case of alcohol consumption, as the fiscalization of production, distribution, and consumption is oriented toward other ends, and not exclusively to the maintenance of the public health pattern which is considered appropriate for the way of life of the South American communities.

Concerning treatment, we have strongly insisted on the supposed efficiency of certain therapies that are used. The poverty of resources, certain deficiencies in therapeutic orientations, and the medical-psychiatric type treatment services restricted to hospitals characterize the reality of treatment in South American communities, except Chile, as observed by Negrete, where the ambulatory recuperation services and programs of hospital after-care seem to provide care for a majority of the population. However, this is not the general view of the other communities of the South American social complex, where the preventive social and health systems do not grant available sums to external treatment in cases of alcoholism. The efficiency of this type of social control is debatable; in this context, we can even include some other institutional defects that depend on providencial systems of the appointed type, where high averages of admissions, in a general way, underline the seriousness of the problem.

Regarding the repressive aspect as a form of social control, the South American legislatures have generally established the prohibition of the sale of alcohol to alcoholics and persons under 18 years of age. On the other

hand, we strive through a tributary policy to apply high taxes to this product which has an important impact on retail prices. In the case of Brazil, the sale of alcoholic beverages under specified conditions is still a violation of the law. Driving under the influence of alcohol also constitutes an infraction of the traffic laws. However, the repressive measures indicated are not predominantly concerned with the problem of public health, but with collateral effects of drunkenness, such as fights, accidents, and homicides. This form of formal control, therefore, has a greater consequence for the effects of drunkenness on other kinds of crimes than on public health. In spite of these contradictions, Negrete points out positive aspects obtained by the Alcoholics Anonymous groups in Argentina, Brazil, Colombia, Peru, and Venezuela, as well as by the activities of the "Club of Abstemious" in Chile, currently organized in associations and federations.

In addition to this view, cultural pressures have played an important role in the patterns of tolerance and allowance revealing a very flexible societal position regarding the consumption of alcohol. Such pressure to abuse alcohol is reflected especially in the fact that the South American population has easy access to these products. As has been said, it is a form of tolerance which has historical roots. The gauchos (natives of the pampas of South America) are rich in drinks as in all their things. The primitive Chileans used to accumulate large quantities of *chicha* which they consumed in large quantities for any festivity. The festivities ended when the whole supply was finished, or when the whole tribe was drunk. However, in this case, the consumption of alcohol by women was prohibited so that they were lucid to face any danger in the community. Also in Chile, they continue a way of drinking wine that seems to be a derivation of the primitive customs. On Saturdays a group of friends sit ritually at a table where they are served with bottles of wine and nothing makes them get up until the last bottle has been finished. By this time all of them are drunk and hardly anyone will go to work the next day. However, this festivity is not strange and they do not condemn it (24). On the rest of the continent economic conditions impose limits on the alcohol consumption, especially wine.

These cultural pressures to abuse alcohol are generalized across all social classes. However, some studies of the problem indicate that distinct social classes and groups tend to present common types of consumption, habits, tolerant attitudes, and also to solve problems in a distinct way. Jose David in his studies, for example, calls attention to the consumption of whiskey and formerly of champagne and liqueur in the upper classes, and to the role taken by bars or clubs in the consumption of alcoholic drinks in middle classes. Other authors, such as Parizeau, say that the alcohol phenomenon is typical of the unprotected social classes or of some susceptible areas. However, it has to be said that alcoholism is only one of the maladjustments that are found in social classes that have lower or inferior material life conditions. As a counterpart, it can even be said that if alcoholism is typical of some classes of society, this happens because of its concurrence with other factors, such as misery, economic instability, temporary unemploy-



ment, and poor health and housing conditions. In spite of this, Pacard-Ami (25) believes that alcoholism affects all social levels equally. The importance of the discussion regarding this fact is that cultural pressures, falling equally or differently upon the various social classes, act as social controls that usually influence tolerant attitudes and habits toward consumption of alcoholic beverages.

Cultural pressures are as prevalent in the rural areas as in the urban areas, creating specific problems of public health. "Alcoholism in rural areas deserves a chapter apart because of the different customs, variation in beverages and the extent of their use, as 45% or more of the Equadorian population lives in the country. Here alcoholism makes easy prey of their inhabitants, being one of the principal causes of the backwardness in which they live" (26). With regard to urban areas a study by Stengen (27) showed that 11.5% of a sample of children from the urban population of a working class suburb of Santiago, Chile, fitted into the epidemiological category of "excessive drinkers."

Besides the cultures of the migratory groups, part of which is their traditional habit of consuming alcohol, the strong presence of Catholicism in the South American communities is a relevant aspect of informal control, acting as a modifier in the consumption of alcoholic beverages. Many inveterate alcoholics try very hard not to drink during the month of May, dedicated to the Virgin Mother; however, they anxiously look forward to the month of June, celebrating with great drinking sprees which start in the very early morning on the first of June (28).

It is useful to remember that cultural pressures are different for men and women. In some South American regions the ability to tolerate great doses of alcohol is a sign of virility, usually creating admiration and respect. Other values, such as nationalism, appear in slogans of the wine industries. For example, some years ago, when the sale of soda water drinks started to spread through Argentina, the wine industry of the country launched an active promotional campaign with the heading: "Drink wine, the drink of the strong." These cultural pressures, as a whole, affect conjugal relationships, since, in general, it has been observed that alcoholics are better tolerated in the family environment on this continent than in other regions of the world. The Catholic orientation, in this case, has had considerable influence on conjugal relations, so that there are few separations due to alcoholism. This same religious orientation, in turn, is reflected in the role played by the wife in the South American family providing moderating effects over the problem of alcoholism. "In the case of the female alcoholic the maternal sentiment is so deep-rooted, that when threatened with the possibility of having their children removed, there is sufficient motivation to abstain from drinking alcohol" (30).

In addition, folk tales and popular images among the lower social classes about treatment and recuperation have negative consequences, usually



being responsible for the high recidivism rates registered in South America. Absurd rumors circulate, such as, "...treatment causes insanity, paralysis, impotence, and debility (because alcohol prevents infirmity) or that the skin peels like fish scales" (31). These cultural aspects, as informal social controls, influence the community's tolerance level to the consumption of alcohol in South America. However, it is important to note that manifestations of aggressive and violent behavior, as well as disinhibitions caused by intoxication, usually provoke or are accompanied by negative reactions and are poorly tolerated by the community.

It is interesting to note that music, such as that for the tango and samba, also reflects the degree of tolerance and permissiveness concerning the consumption of alcohol. In typical environments, where the tango and samba are danced, the habit of taking alcoholic drinks is encouraged by the environment itself. In the case of the tango, "...the songs' messages are sad and nostalgic, depicting depressive situations and a certain conformity of behavior stands out when faced with contradictions of destiny. They describe a man generally sad and lonely wanting to talk about his sorrows. The stereotyped form of relief inevitably includes drinking. The tango justifies alcoholism or the dependence on alcohol through distinct rationalizations, such as the celebration of a lovers meeting, calming distress, or giving a fair farewell to friends" (32). The fatalistic view which is transmitted by the tango does not exist in the samba, the main topic of which concerns a festive character, making the consumption of alcoholic drinks easier.

### **Social Controls and Traditional Pharmacodependencies**

Besides alcoholism and the abuse of pharmaceutical products, a considerable portion of South America's population continues a series of traditional cultural practices consisting of the use of psychoactive and hallucinogenic substances. This group of practices has been named "folkloric" pharmacodependencies. Since these habits involve a great number of people, many authors have found it necessary to develop preventive campaigns in order to control the abuse of these drugs. Illustrative examples of these folkloric practices and habits are the *coqueio* and the *peyotismo*, the first having progressively spread among indigenous peoples and peasants of the central Andes, Bolivia, Peru, and north Argentina.

In this context, however, the case of coca deserves special mention. The dependence on coca is relative, since the habit may cease spontaneously, such as when individuals are transferred from one region to a region where the *coqueio* —that is, the custom of chewing coca leaves—is practically nonexistent. The popular use of this drug is a significant general public health problem, not only because of the type of population that traditionally practices the *coqueio*, but also due to aspects related to the production of the coca leaves which for some South American countries constitutes an important economic resource, as in Peru and Bolivia. Usually the *coqueros* are people of the lower social-economic levels; other related factors include

poverty, illiteracy, and poor health conditions, nutrition, and habitation. Regarding production, Negrete noted: "In 1970, the National Coca Enterprise registered a consumption figure of 9,079,472 kilos in Peru, in comparison to the eight million kilos that were consumed in 1964, when the Peruvian government came to an agreement with UNO, which would progressively reduce the production of coca in the country. In testifying that *coqueio* is practiced by 50% of the economically active rural population in Peru, the importance of this pharmacodependency in the field of public health cannot be doubted considering the studies indicating the existence of a psychological deficit of a cognitive type associated with the chronic use of coca leaves" (33).

It is important to note in this case the cultural pressures and views of this population, as a whole, which favor the *coqueio*. There is a popular belief that the habit of chewing coca leaves increases the capacity for manual work and makes it possible to face hunger and some diseases with fewer physical and psychological problems. It is in this way that the generalization and "democratization" of this practice for the whole population has been noted in several papers. Contrary to alcoholism, which is primarily tolerated only for men, *coqueio* is practised also by women and children, especially in the Bolivian plateau and in the Peruvian mountains. Negrete also calls attention to the behavior of employers in relation to these habits. "The employers in the affected zones accept it and even encourage it among their employees; in certain regions a ration of leaves is part of the payment for work done." "...The selling of coca is legal and is very visible; it is possible to find them in free markets and food markets" (34).

Another public health problem consists of the use and abuse of hallucinogenic substances. An interesting fact in Brazilian society is described by Maria Candida Vergueiro Santarcangelo: "At the IV Symposium of Medicinal Plants of Brazil...Professor Richard Evans Schultes presented a list of hallucinogenic plants of South American origin (...). Those described as Brazilian are usually found in the Amazon Basin. They are: the *ayahuasca*, *Caapi*, *Banisterias*. Besides being well known by the indigenous of Peru, Equador, Venezuela, and Colombia, these substances have been used significantly by the Indians in the upper Amazon. The yage of the Opocinageas is an original creeper of the Amazon Basin. It used to be prepared as a drink for traditional celebrations. Epona is the name of a liana from which our natives extracted a powder that produced a hallucinogenic drunkenness, which was usually inhaled through rudimentary tubes made from birds' bones. With slavery, in the 16th century, the negro slaves brought seeds of the cannabis which they planted. These plants thrived because of the climate. It was called 'Angolean tobacco' because it came from this African country. Its use developed rapidly in Alagoas, Sergipe, Bahia, Pernambuco, Maranhao, Para, Amazonas, etc. The slaves used it for their fetishist rituals and as a relief to their physical and mental suffering. From a witch doctor's and old caboclo's vice as the time passed it spread among the populations of the northeast." (35). The use of hallucinogenic

substances by the whole of the South American rural native population is an important aspect to be considered when evaluating the spreading incidence of the phenomenon into the urban environment.

However, it should be noted in addition that this form of informal social control, while contributing considerably to tolerance and permissiveness with regard to drug abuse, also provides some moderating influences over the consumption and abuse of these drugs, with prophylactic results. "We cannot ignore the important contribution of certain traditional religious and curative practices of Latin America in the prevention and rehabilitation of the patient. The Afro-American rituals practiced in Haiti and Brazil appear to have a moderating influence over the use of alcohol and drugs. Because of the essential role that these are given by culture, their popularity, it is necessary to have them present in the planning of preventive and assistance programs." (36).

### **Social Controls and Urban Pharmacodependencies**

The non-medical use of drugs and its epidemic aspects is becoming one of the most serious public health problems afflicting the large urban areas of South America as in most of the industrialized countries. It has been established that certain epidemiological characteristics distinguish the situation in South America from national situations. For example, the consumption of opium and its derivatives has not assumed the proportions found in the United States, as noted by several authors. This is partly related to individual per capita incomes for most countries in the South American region where there is little money for costly drug habits, such as heroin use. It is also partly due to the traditional customs and habits that most drug users consume hallucinogenic substances, primarily marihuana, as well as to the easy accessibility of these drugs. In addition, a tradition of liberal medical prescribing practices, especially stimulants and tranquilizers, certainly constitutes one of the most dominant factors in the South American communities.

Concerning the question of liberal prescription practices, we have to point out that the social responsibility falls upon the medical staff. Formerly, certain types of medication were prescribed only to relieve pain caused by illness or by serious accident. Currently, however, these medicines are prescribed to relieve mental problems, even those of little consequence, such as distress, transitory nervousness, or temporary difficulties that could be tolerated without the help of medicines. Parizeau (37) observed that in addition to this pattern, a type of "informal medicine" has developed, the objective of which is to mitigate the burden of difficulties inherent in both professional and family existence, traditionally treated only by the moral assistance of a confessor, friend, or relative.

Other aspects aggravate this traditional liberalness in the prescribing of medication even further. As Negrete observes, "...we testify that the laboratories produce the medicines more rapidly and with more ease in Latin



America than in other regions. Consequently, the number of available products on the continent is considerably higher." For example, in Brazil, the open selling of psychic medicines is prohibited. However, the pharmaceutical industry succeeded in by-passing the law by producing compositions that are not included in the lists (example: use of diazepam associated with an antihistimine) (38).

At the heart of this multi-faceted problem the formal social controls operate in the same dimensions as in the case of alcoholism—namely, prevention, treatment, and repression. Seeking to minimize the cases of dependence and abuse of drugs among the urban population the primary prevention actions usually entail creating an unfavorable image of pharmacodependence as much as limiting the access of drugs. In this respect, Negrete calls attention to the success of the preventive programs developed in Chile. However, the introduction of preventive programs, such as drug education, has given rise to polemics. For example, "The general orientation consists essentially of informing the informers: medical doctors, students, parents and teachers. But, at the moment, no specific didactic program is foreseen. Courses about drugs and distribution of explanatory booklets are not advisable, and direct action is advisable only when absolutely necessary. All excessive publicity runs the risk of increasing danger." (39) However, in another report: "The informational and educational activities play an important role in the prevention of the destructive use of drugs and in the decrease of the extra-medical use of psychotropic substances. Without restrictions, information and education should not be compared. Each one of these is an instrument that should be used discerningly for carefully defined purposes and groups" (40). While some groups point out the importance of drug education as a formal social control, others seek to show the other side of the coin, that is, the negative effects of some types of educational programs and of some information, that, far from establishing less tolerant attitudes toward misuse of medicines, have actually provided impetus for drug experimentation. Therefore, according to Professor Birdwood, "only education enjoys the doubtful privilege of making things worse" (41). In the case of South American communities one cannot, with the exception of Chile, concretely evaluate the impact and consequences of some educational programs. It is known, nevertheless, that other types of primary preventive actions of an informal character have determined popular images about the consumption of some hallucinogenic substances.

In addition to these aspects, the formal social controls relating to treatment on the South American continent can be categorized as the curative and rehabilitative type, a natural consequence, it seems, of the traditional liberal medical prescription practices which have already been mentioned. As in the case of alcoholism, the lack of resources for hospital and psychiatric treatment, the insufficiency of adequate ambulatory treatment services, and the absence of accompanying post-hospital programs is accentuated in the South American communities. It is worth adding that in



the case of the so-called urban pharmacodependencies, this type of control is made difficult, on one hand, by the character and nature of the repressive legislation and, on the other hand, by the existing therapeutic orientations. The repressive character of the law regarding the user in general usually provokes a certain reluctance on the part of the user to seek hospital treatment. According to Negrete the user faces the fear of being involved with the police and justice, since the trafficking and consumption are processed through the criminal justice system, usually working separately from health services.

Further, the shortage of adequate clinical services in South American communities as a whole causes this form of formal social control either to be inefficient in terms of influencing the situation or to provoke reactions which are inconsistent with creating negative attitudes toward the use of non-therapeutic drugs. Negrete provides an illustration from Brazil: "...when judges decide on the sentence in cases of toxicomania they can choose incarceration in prison or hospital internment. Without hospitalization such cases must suffer long periods of 'treatment' in common prisons or in the so-called judicial asylums, where these individuals (the users of drugs) have to live together with delinquents of all kinds without receiving special attention. Such circumstances favor the existence of certain undesirable disparities. For example, an individual from the privileged class is able to finance his internment in a private medical centre, while drug addicts without means have to stay in prison." (42)

Finally, concerning repression, you could say, as usual, that in South American communities the law is equally repressive for both users and dealers, although the latter are its main objective. Through repressive laws the South American legislatures aim to decrease the traffic and consequently reduce the availability of drugs. However, the introduction of legal behavioral norms for certain drugs cannot be considered efficient or satisfactory. For example, in research done in São Paulo, "...the various practices of pharmacies, subject to the same law, permit us to consider that other facts interfere in the variation of the consumption of medicines. While the law continues to be rigid, a complexity of facts seem to influence the variation in drug availability." (43) This observation places in doubt the value of the law as a deterrent as well as its efficiency as a form of social control. "The efficiency of the law varies according to the viability of its application and execution. More important than the intimidation of the drug dealer, through the severity of foreseen punishment by law, is the intimidation exercised by the certainty of its condemnation." (43) Besides this, certain omissions in South American legislature make the law less effective as a formal control, as in the absence of norms relative to the consumption and trafficking in drugs, or the absence of judicial distinction between users and dealers.

The ambiguous attitude prevailing within formal social control institutions is not absent in informal social control settings. Certainly, in a cultural

model of drug abuse, the family, school, work, professional associations, or peers and mass communication should be evaluated in terms of their greater or lesser capacity for creating a "market for users of drugs," fomenting the development of illicit traffic and pharmaceutical products. There seems to be agreement that there is a causal relationship between the epidemic tendencies of drug use in the South American communities and the transformation that the family structure is suffering. Such factors as, among others, the rising expectations for improving material welfare, the annoyances of daily life, parents working too much, and the crises of parental authority that create obstacles to communication between parents and children are of interest. The traditional structure of the South American family has been perfectly described by Gilberto Freire. He states that "a child who based his own morality, and consequently his own conscience, on paternal authority would learn to respect and love whoever offered understanding of him as a human being and would also learn respect for authority in general and not only that of the family. The family had been converted into an object in which society actuated a link, through education, for social adaptation, and in this way formed men as was necessary to meet the needs imposed by the social system." (44) The authority of the head of the South American family, above all of the aristocratic families, was marked by authoritarianism, affecting all spheres of their children's lives, including their habits, customs, and even their destiny. In this way, smoking cigarettes or drinking alcohol were habits rigidly defined among men and, women and parents and children.

Pressures of a social origin, motivated by the introduction of industrialization and by the effects of South American urbanization, caused changes in the family structure. "The family authority, already as the authority of sexual taboo, sees its authority debilitated, because the family no longer securely guarantees the material life of the members and can no longer sufficiently protect the individual against the outside world that inexorably exerts more pressure over time. The equilibrium of equivalence wavers between what the family demands and what it offers; therefore all the so-called family powers, as such, result in emptiness." (45) In this way, "the father is substituted by collective powers, such as the student class, the sports team, the club, and lastly the State. The youth show a tendency to submit themselves to any authority, no matter what it consists of, whenever it offers protection, narcissistic satisfaction, material advantages, and the possibility to unburden sadism onto others, in which they find a covering for unconscious disorientation and despair." (46) It is from this perspective that you can think of the effects of the loss of efficient family control over the behavior of its members concerning drug use and abuse. There is a certain intransigence in the exercising of paternal roles and in the diffusion of beliefs related to the application of rigid norms and rules that act to cause evasion and relatively few contacts, thus obstructing the channels of communication between parents and children, creating a cultural gap. As in savage communities where the incest taboo had an essential role in

organizing internal family relations and obliging members to seek outside relationships, the present family conditions have obliged people to look for new contacts, motivations, and forms of escape to the cultural universe where drugs may become a component part of daily life.

In an important research study performed in Colombia concerning pharmacodependence among secondary school students in Bogotá, Barranquilla, and Bucaramanga, some variability from the familiar social point of view was verified; for example, students from the urban areas showed a greater knowledge of the use of drugs and similar popular substances than those from the rural areas. The first explanation supplied by the researchers is the greater availability in urban environments of these types of substances. Also considered was the role played by the intact nuclear family in rural areas. Another variable investigated referred to the type of sociability. It was observed that a high index of consumption of psychoactives is less prevalent for the student who lives with his parents. The research in this particular area suggested that the greater cohesion of the family group, as well as the greater possibility of identification with relatives, yields the least tolerance toward the consumption of psychoactive substances (47).

The role played by disciplinary rules as informal social controls in school and in working situations was also examined—although to a lesser degree because of the absence of studies regarding this subject. Research on community attitudes and pharmacodependence revealed that the urban population of São Paulo tends to show a generally liberal concept regarding the leadership in school and at work. In these environments knowledge of authority tends to be minimized, since the groups are smaller and the leaders and those being led feel more closely identified in their roles (48). This aspect is relevant to the extent that the influence exercised by the emancipation of some persons from societal controls and their effects on the link of these persons to the control of small groups are investigated. Within this context we can place alcohol and drug subcultures, which contrast with the affirmative character of dominant South American culture. In addition, it was noted that in the case of schools, the problem becomes increasingly complex each time the family transfers its problem-solving authority to the schools, including problems of drug dependence.

The religious aspect of informal social control should be considered in the study of pharmacodependencies. In the case of South American communities, it is of interest to note the role played by Catholicism in the make-up of the "popular mentality," with its myths, beliefs, and legends. An equally significant aspect is inherent in Afro-Brazilian and indigenous religions and beliefs. Messianic movements which appeared at the end of the last century, but which spontaneously appear in various other places on the continent in critical and transitional situations, also deserve special attention. The hierarchies between saints and angels, gods, and demons form fundamental dimensions of the mentality of peasants, urban workers, and



other groups and social classes. Religious representations have a fundamental role as moderating agents of the use and abuse of psychoactive substances to the extent that drugs interfere with the basic conception of the human constantly seeking a solution to the harshness of everyday life. Concerning this aspect it is still important to consider not only the role of urban and rural Catholicism but also the presence of the urban witch-doctor, who has also exercised prophylactic effects.

Finally, it is convenient to refer to the roles played by peers and by the mass media in the configuration of a profile of favorable attitudes toward non-medical drug use in the main urban areas of the South American continent. Little can be said about this. The investigations are few and the studies made about the complexity of the problems in the South American communities are recent. Referring to peers, their efficiency in terms of reinforcing the control of small groups which can be detrimental to the controls of society has been pointed out. As an ultimate consequence, a type of drug subculture develops. Motorcycle groups in São Paulo and Buenos Aires are typical examples of the phenomenon. As for the effects of mass communication, we have demonstrated the ambiguity of its role. Media information in general is centred on the mysterious and prohibitive aspects of drugs and the sensational character evoked by certain information (such as rock concerts of the Woodstock type) instead of alerting the public to phenomenon of dependence and to the destructive character of psychoactive substances.

## **Conclusions**

From what has been observed, it can be stated that in South American communities, marked by unequal patterns of development either among the countries of the continent or among regions within a single country, the success of the existing social controls over the use and abuse of alcohol and other drugs is declining. The phenomenon is partly due to incompatibility between the functioning and efficiency of the informal social controls and the structure of the institutional controls, generally dominated by police and judicial institutions.

Under present development conditions in South American communities the functioning of social controls over the community spheres of human behavior tends to broaden the sphere of the formal controls, diminishing the role of informal controls. The role of the family, of the religious community, of the school, and others, have been progressively replaced by controls stemming from judicial law and intentionally focused on the problem. However, only one phenomenon has been verified in South American countries as a whole: the increasing impersonality and complexity of living conditions in the urban environment, decisively affecting the efficiency of the existing social controls. Concerning the consumption and abuse of drugs, it becomes difficult to maintain control if there is always a



necessity to impose and adopt increasingly repressive measures. It is in this sense that we can affirm that effective controls cannot result in establishing social controls exclusively within the legal realm unless law is associated with other institutions of social control.

It is necessary to consider that the impact of drug use and alcoholism in the South American communities depends as much on the way in which they were introduced and institutionally controlled as on the individual. However, there should be an equilibrium between the pressures exercised by peers, family, cultural customs, and moral attitudes, and the legal norms and regulations. Such an equilibrium should reduce the degree of risk of exposure to pharmacodependency. The formal societal response should be directed toward problems that affect this desired equilibrium, thus maintaining levels of use and abuse within socially tolerable limits, that is, within the limits that do not constitute public health problems.

In South American communities, we try to emphasize the use of the cultural milieu to confine drug abuse within certain boundaries somewhere between socially tolerated and actually permitted. In this fashion even the worst substances are controlled to a certain degree by informal institutions, such as peer groups and the family. All formal social controls should therefore be directed to those behaviors that are not adequately controlled by the informal mechanisms of control. The formal mechanisms only aim at reinforcing the latter and should directly intervene only as a last resort. Drug policy, therefore, cannot form in an emptiness that separates traditional pharmacodependence from the urban pharmacodependence. Any policy proposal for controlling drug abuse must consider its probable impact on user behavior, other social values, and the institutions themselves.

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# THE ROLE OF ALCOHOL AND DRUG CONTROL LEGISLATION

by Dr. Ayush Morad Amar

What distinguishes formal social controls<sup>(12)</sup> from other types of control are their universal abstract and institutionalized character. The objectives are understood as universal in a certain community and applied with the same degree of imposition and sanction, independent of group, class, ethnic aspect, or social differences. In the case of the rights and the law, these controls—different from preventive and educational programs—appear as conciliatory mechanisms between groups and situations. Their institutionalized character derives from the fact that they are elaborated and formulated by formal mechanisms, such as the legislative body, the executive body, and councils.

The analysis of the tendencies of illicit use of drugs and its consequences to the international programs was one of the subjects dealt with during the seminar held by the United Nations in Geneva, September 1975, under the auspices of the United Nations' Fund for Drug Abuse Control (UNFDAC).

Points raised during the seminar included the difficulties of answering certain questions: i.e. how to avoid the new tendencies of non-medical use of drugs, how to recognize such tendencies in time, and how to obtain early information on this subject. Another point studied by the participants was national drug legislation in various countries.

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This paper is a summary of "The Role of Alcohol and Drug Control Legislation" which is available upon request from the Addiction Research Foundation of Ontario. References for the summary follow Dr. Amar's "Social Control as a Factor in Non-Medical Drug Use."



The international drug legislations only covered drug controls; it did not refer to the non-medical use of drugs. Some types of drugs, generally considered harmful to humanity, were cultivated, manufactured, traded, and distributed under international control.

Because international treaties do not establish the line of conduct, national governments are free to go beyond the provisions fixed. It is worthwhile quoting article 23 of the text of the *Convention on Psychotropic Substances*, dated 1971, of which Brazil was one of the signatories. The text has already been included in Brazil's national legislation, through the Act No. 90 dated December 5, 1962. The article says: "Any signatory may adopt stricter and more severe means of control than those established in the present Convention if, in the opinion of the interested Part, such measures were convenient or necessary to the protection of health and public welfare."

The participants of the United Nations' seminar mentioned, as an example of national action, the case of many governments which apply sanctions to the unauthorized possession of drugs for personal use as well as their unauthorized use, with the same severity applied to the illicit traffic, even though there are not such requirements in the treaties themselves.

It was observed that at the same time, there is a tendency of decriminalization of certain activities relating to drugs.

The second conference of directors of the Criminological Research Institutes promoted by the Council of Europe on November, 1974, concluded that it was necessary to encourage research concerning both the effects of the legislation on the evolution of the phenomenon of drugs, and the social consequences of such an evolution.

On the other hand, the World Health Organization committee on drug dependence briefly presented the following aims of the legal controls concerning drugs which are generally adopted:

1. limiting the availability of drugs which cause dependence;
2. authorizing or fostering the development of treatment, correctional and enforcement resources and services;
3. providing compulsory treatment of persons who use dependence-producing drugs in a destructive or unlawful manner;
4. punishing persons for the use of drugs or acts closely related to such use (e.g. possession or sale of "small" amounts);
5. punishing and/or quarantining individuals who traffic in drugs;
6. deterring others from drug use or trafficking.

However, legal controls may aim at the imposition of partial limitation or at the disappearance of the incriminated drug. Nevertheless, the pressures in favor of new legislation are complex, so that, in order to appease public

emotion, it happens that wilder or more rigorous measures than would be convenient, are taken.<sup>(5)</sup>

The experimental method in public health might have an excellent opportunity for being applied when considering the modification of the texts in force.<sup>(5)</sup>

It would be naive to believe that the legislator usually acts in accordance to scientific needs.<sup>(5)</sup>

In the specific case of law, questions have been raised about its efficiency as a means of social control. The impact caused by the difference between social rules and values raises, as an unavoidable consequence, the disagreement between penal law and the reality of the resolute community. "The lack of effectiveness and performance of law can be illustrated by the increase of the incidence of crimes, delinquency, and other important social problems such as recidivism, alcoholism, drug dependence, abuse in the use of medical substances, suicide, violence, and mental sickness."<sup>(13)</sup>

The penal law limiting the non-medical use of drugs and their availability embrace many purposes which are, in modern times, attributed to the penal law in general, i.e. prevention, repression, and treatment, the latter being the real objective of the penalty.

The preventive aspect of the penal law is a projection of cause and effect, in which the evidence of the non-medical use of drugs or the simple possession of the controlled drug, for instance, would be the cause, and the punishment of the offender its respective effect. In other words, it attempts to act as a deterrent.

Deterrence may be defined as the preventive effect which actual or threatened punishment of offenders has upon potential offenders. Nevertheless, deterrence does not always prove to be efficient in practice.

It was found in a survey that the general effect of deterrence may be different for different types of offenses and offenders.<sup>(2)</sup> On the other hand, the lack of legal restrictions on the use of some drugs (such as alcohol) and accordingly, the lack of legal deterrence, might offer a wider and wider opening for the excessive use of non-controlled drugs by the law, in the face of increasing repression in order to detect the controlled drugs.

We have to observe, however, that the logic of the formal social controls is the concrete efficiency of them. Implementation of controls acts upon the consequences of drug use and not upon its causes or origins. It is exactly in this way that Bergalli points out:

*It sometimes happens that the social control and, more concretely, that which consists of judicial ways and forms, tend to eliminate consequences, including symptoms, without, however, facing decisively its causes and those other elements that in some way are in its origin. This even has a self-defeating effect in that when the symptomatic type of manifestations appear, it actually distorts the mechanisms that in another situation would have*

*worked more smoothly and naturally in the social sphere. In such a way, when regarding law as a form of social control where it cannot be separated from other types of control (control by suggestion, or publicity, by faith, by social ideas, by simple force), neither is the type of organization and political life that the community adopts.<sup>(17)</sup>*

## Social Controls in South America

Objective indicators of social pathology—such as the percentage of individuals of the population that depend on the use of alcohol, the death rate, morbidity, invalidity, unemployment, and cost of services—seem to indicate that alcoholism is one of the most serious problems of public health in South American communities.

Currently, the consumption of alcoholic beverages include all types of products, ranging from folkloric products (clandestine distillation or contraband and illegal consumption) to products that come from the official market.

Considering the historical limits, it can be said that the habit of consuming alcohol (not only concerning quantity or volume consumed but also concerning the type of drink and the way of drinking) has been tolerated or permitted in South American communities for a long time. Therefore, the investigation of which types of social controls act in this situation as modifiers of the consumption patterns and with what degree of efficiency, should be carried out.

As was mentioned previously, formal social controls generally operate in three dimensions: prevention, treatment, and repression. With regard to prevention, the aspects to be considered refer to the production of alcoholic beverages. In South American countries, the production of alcohol is legal and controlled. The impact of clandestine production has had relatively little official attention although it competes with the official market. And, in this case, "The control of the distilled drink production by the state monopoly could not lower the consumption (of alcohol) in Uruguay and Costa Rica. Another important preventive aspect that is being neglected in Latin America is the quality control of the alcohol production. This aspect is relevant because of its significance to public health, as alcohol is a cause of intoxication and poisoning."<sup>(23)</sup> These figures usually demonstrate the low efficiency of prevention as a form of formal control in the case of alcohol consumption, as the fiscalization of production, distribution, and consumption is oriented toward other ends, and not exclusively to the maintenance of the public health pattern.

Concerning treatment, we have strongly insisted on the supposed efficiency of certain therapies that are used. The poverty of resources, certain deficiencies in therapeutic orientations, and the medical-psychiatric



type treatment services restricted to hospitals, characterize the reality of treatment in South American communities. An exception is in Chile, as observed by Negrete, where the ambulatory recuperation services and programs of hospital aftercare seem to provide care for a majority of the population. However, this is not the general view of the other communities of the South American social complex, where the preventive social and health systems do not grant available sums to external treatment in cases of alcoholism.

Regarding the repressive aspect as a form of social control, the South American legislatures have generally established the prohibition of the sale of alcohol to alcoholics and to youngsters under 18 years of age. At the same time, the governments strive through a tributary policy to apply high taxes to this product which has an important impact on retail prices. In the case of Brazil, the sale of alcoholic beverages under specified conditions is still a violation of the law. Driving under the influence of alcohol also constitutes an infraction of the traffic laws. However, the repressive measures indicated are not predominantly concerned with the problem of public health, but with collateral effects of drunkenness, such as, fights, accidents, homicides, and violence. This form of formal control, therefore, has a greater consequence for the effects of drunkenness on other kinds of crimes than on public health.

### **Social Controls and Urban Drug Dependence**

The non-medical use of drugs and its epidemic aspects is becoming one of the most serious public health problems afflicting the large urban areas of South America, as in most industrialized countries. It has been established that certain epidemiological characteristics distinguish the situation in South America from national situations. For example, the consumption of opium and its derivatives has not assumed the proportions found in the United States, as noted by several authors. This is partly related to individual per capita incomes for most countries in the South American region, where there is little money for costly drug habits such as heroin use. It is also partly due to the traditional customs and habits and the easy accessibility of drugs that most drug users consume hallucinogenic substances, primarily marihuana. In addition, a tradition of liberal prescribing practices, especially for stimulants and tranquillizers, certainly constitute one of the most dominant factors in the South American communities.

Concerning the question of liberal medical prescription practices, we have to point out that the social responsibility falls upon the medical staff. Formerly, certain types of medication were prescribed only to relieve pain caused by illness or by serious accident. Currently, however, these medicines are prescribed to relieve mental problems, even those of little consequence, such as distress, transitory nervousness, or temporary difficulties that could be tolerated without the help of medicines.



The formal social controls relating to treatment on the South American continent can be categorized as the curative and rehabilitative type—a natural consequence, it seems, of the traditional liberal medical prescription practices. As in the case of alcoholism, the lack of resources for hospital and psychiatric treatment, the insufficiency of adequate ambulatory treatment services, and the absence of accompanying post-hospital programs is accentuated in the South American communities. It is worth adding that in the case of the so-called urban pharmacodependencies, this type of control is made difficult by both the character and nature of the repressive legislation and by the existing therapeutic orientations. The repressive character of the law regarding the user usually provokes a certain reluctance on the part of the user to seek hospital treatment. According to Negrete, the user faces the fear of being involved with the police and justice, since trafficking and consumption are processed through a criminal justice system which usually works separately from health services.

Further, the shortage of adequate clinical services in South American communities causes this form of social control either to be inefficient in terms of influencing the situation or responsible of provoking reactions which are inconsistent with creating negative attitudes toward the use of non-therapeutic drugs.

Finally, concerning repression, the law in South American communities is equally repressive for both users and dealers, although the latter are its main objective. Through repressive laws the South American legislatures aim to decrease the traffic and consequently reduce the availability of drugs. However, the introduction of legal behavioral norms for certain drugs cannot be considered efficient or satisfactory. For example, in research done in São Paulo, "... the various practices of pharmacies, subject to the same law, permits us to consider that other facts interfere in the variation of the consumption of medicines. While the law continues to be rigid, a complexity of facts seem to influence the variation in drug availability."<sup>(43)</sup> This observation casts doubt on the value and efficiency of the law as a deterrent. "The efficiency of the law varies according to the viability of its application and execution. More important than the intimidation of the drug dealer, through the severity of foreseen punishment by law, is the intimidation exercised by the certainty of its condemnation."<sup>(43)</sup> In addition, certain omissions in South American legislature make the law less effective as a formal control, as in the absence of norms relative to the consumption and trafficking in drugs, or the absence of judicial distinction between users and dealers.

## Control Strategies

The elaboration of control strategies related to drugs involves three things: politics, science, and community. Would we be able to describe the exact role of each of them?

Would we agree upon the approach which states that the relationship between these entities must be as close as possible?

Would we also agree upon the hypothesis that it is the responsibility of politicians and of politics to explain their goals and to remain flexible with changes in public opinion when taking into account the discoveries made by science?

In order to answer these questions, we tried to determine the attitude of the urban population of São Paulo city concerning judicial controls of the use and abuse of drugs.

The questions asked did not give any indication of legal dispositions in force, thus avoiding replies which would try to coincide with the proper legislation.

**TABLE No. 21**

Opinions regarding the law: repression and punishment

The law should be more severe with:				
	Age groups	A	B	C
Offenders		14-18	19-25	26+
The drug user		0.5	1.2	—
The drug trafficker		16.6	14.2	14.0
The user as well as the trafficker		12.0	9.2	14.0
The law should not be severe with either the user or with the trafficker but only suggest preventive measures				
		12.0	9.8	7.0
The law should recommend treatment for the user and prison penalty for the trafficker				
		57.2	64.6	63.0
No reply		1.7	0.5	1.0
More than one of the above mentioned alternatives				
		—	0.5	1.0

The considerable incidence of preference given by the three groups (A, B, and C) to the alternative which establishes treatment for the user and prison penalty for only the trafficker, intensifies the different treatment which, in the opinion of the population, should be given by the legal controls to the drug user and drug trafficker.

It is interesting to note that the groups A (age 14-18), and B (age 19-25) stressed the idea of more severe punishment for the trafficker.

On the other hand, group C (age 26 and over) wanted to extend the punishment to the drug user as well. The preference did not converge to the alternative, in which only the trafficker was mentioned.

Although this proportion may be found in groups A and B as well, it is more conspicuous in group C as the incidence of replies in the above mentioned position keeps a considerable distance from a third alternative.

A considerable percentage of replies to the alternative which establishes only preventive measures to the problem are evident in groups A and B, thus opposing the previous propositions.

**TABLE No. 22**

The law should be more severe with the person who induces a juvenile to the use of drugs.

Replies	Age group	A 14-18	B 19-25	C 26+
Yes		84.5	89.1	93.0
No		14.3	5.8	4.0
No reply		1.2	5.1	3.0

In this table we may notice that the affirmative replies clearly prevail over the negative ones in the three age groups (84.5%, 89.1% and 93.0% respectively); but the negative replies have a larger incidence in the group of 14-18 (14.3%) when compared with the other age groups.

The severe position adopted by the population under study became quite evident mainly in groups B and C.

**TABLE No. 23**

Only the drug trafficker should be convicted because the drug user is a sick person and deserves treatment and rehabilitation.

Replies	Age group	A 14-18	B 19-25	C 26+
Yes		66.8	63.5	78.0
No		20.0	18.8	15.0
No reply		13.2	17.7	7.0

This table presents a large incidence of affirmative answers in the three age groups, especially in the age group of 26 and over (78.0%). On the other

hand, the negative replies to the question asked show a large incidence in the age group of 14-18 (20%). The proportion of persons who did not answer is very significant, especially in the age group of 19-25 (17.7%).

The population under study is of the opinion that the drug user is a sick person and deserves treatment and rehabilitation while the trafficker should be convicted.

Here, the drug user is viewed in a new light: a sick person.

However, an important part of the groups under study (especially in group A and B) seems to reveal one of the following hypotheses: a) on one side, not considering the drug user as a sick person, even though he needs treatment (as revealed in another table); b) on the other side, not considering the drug user as a person incapable of self-determination.

Taking into account those hypotheses we might reinforce them, remembering, Table 21: if we take items b and e ("a more severe law for drug trafficker" and "a law recommending treatment for the drug user and prison penalty for the drug trafficker") and add up the percentages reached in each group, these results should be similar to the percentages reached by the alternative "Yes" in table No. 23, because the idea is common to both, even though in a different way.

This similarity in the results would imply a coherence of the positions taken by the groups. From that point of view, only group C registered very similar results (77% in the sum and 78% of affirmative replies). Groups B and C showed high figures for the sums (A) 73.8% and B) 78.8%) yet they kept considerable distance from the figures for positives replies (A 66.8% and B 63.5%).

Nevertheless, the sum of the percentages of the total of negative replies, plus that of the total of questions not answered by groups A and B, increased significantly, (A) 33.2% and (B) 36.5%), which seems to reinforce the hypotheses previously suggested, showing perhaps disagreement in considering the drug user as a sick person.

**TABLE 24**

To put an end to the drug problems, the conviction of the drug user as well as of the trafficker, with penalties of 10 to 20 years of imprisonment, would be necessary.

Replies	Age group 14-18	A 19-25	B 26+	C
Yes	10.2	10.2	12.0	
No	62.3	67.5	65.0	
No reply	27.5	22.3	23.0	



Table 24 shows a majority of negative replies in the three age groups with larger proportion in the group of 19-25 (67.5%). It is followed by the proportion of persons who did not reply, especially in the age group of 14-18 (27.5%).

An accentuated reaction on part of the population under study was observed i.e. reaction against the idea of conviction of the drug user and of the drug trafficker, with penalties of 10 to 20 years of "imprisonment." We can even observe a certain uniformity in the percentages reached by each group, the highest percentage being reached by group B (19-25).

On the other hand, the percentages registered in relation to the omission of answers to the motion were considerable, being more evident in the group A than in groups B and C. We might consider that such omission would imply, on one hand, the disagreement with the inclusion of the drug user and trafficker in the same classification and, on the other hand, the disagreement as to the length of imprisonment. These two alternatives would be based on positions taken by groups A, B, and C, in other tables previously discussed.

**TABLE No. 25**

The law must be sufficiently severe with the drug user as well as the drug trafficker because:

Age group	A	B	C
Opinions	14-18	19-25	26+
Every drug user is a trafficker	4.0	1.7	4.0
Every trafficker is a drug user	6.8	4.6	9.0
Both fall into the same crime	17.8	15.4	22.0
We do not have resources available for treatment	14.3	16.0	9.0
No reply	57.1	62.3	55.0
More than one of the above alternatives	—	—	1.0

In the three age groups, the number of persons who did not answer was considerable. This suggests a certain difficulty in classifying the drug user in the presence of legal controls as well as in relation to the trafficker (the characterization of the latter is well defined, according to the positions previously presented). Or else, that position might reflect a reaction against the application of the same punishment for the drug user and the drug trafficker.

**TABLE No. 26**

3. The law should be applied considering each individual case, on its merits, punishing certain persons and acquitting and recommending for treatment others.

Replies	Age group	A 14-18	B 19-25	C 26+
Yes		81.1	76.6	85.0
No		13.1	9.2	10.5
No reply		5.1	14.2	5.0

In table 26, the high percentage of affirmative replies is evident. The idea of individualization when applying the law became quite evident.

**TABLE No. 27**

To resolve the drug problems, it would be advisable that the law established educational programs for schools.

Replies	Age group	A 14-18	B 19-25	C 26+
Yes		81.2	77.1	89.0
No		14.3	15.5	5.0
No reply		4.5	7.4	6.0

The population under study seems to emphasize the need for the law to introduce educational programs in schools to resolve the drug problem.

It is interesting to observe that group C, representing the oldest of the three groups, showed the greatest preference for this recommendation. Precisely the age group of the population which would participate in such programs (group 14-18), while attending school, as well as the intermediate age group, showed more opposition to this measure.

**TABLE No. 28**

Drug use is not a crime but drug trafficking is.

Replies	Age group	A 14-18	B 19-25	C 26+
Yes		43.5	34.9	39.0
No		46.2	49.1	45.0
No reply		10.3	16.0	16.0

The wording of the question permits us to conclude what the population considers law concerning drug use and drug trafficking. Thus, we may verify that almost half of the population under study assumes that the law considers drug use as well as drug trafficking a crime. Nevertheless, a considerable part of the population analyzes the problem in an opposite way, i.e. considers exclusively the drug traffic as a crime.

From this assumption we may conclude that the content of the law is not sufficiently well known to the population.

**TABLE No. 29**

Nowadays the drug problem is more difficult to be solved because:				
Opinions	Age group	A 14-18	B 19-25	C 26+
People do not know the law		3.4	2.9	1.0
Even though people know the law, they use and traffic drugs		20.6	20.0	13.0
People are not properly informed about the effects of drugs		33.8	32.0	35.0
The existing preventive measures are inefficient		24.6	28.6	30.0
The measures of punishment are not efficient		3.4	2.2	6.0
No reply		14.2	13.8	11.0
All the above		—	0.5	2.0
None of the above		—	—	2.0
More than one of the above mentioned alternatives		—	—	2.0

Three alternatives were more evident than the others in a relatively homogenous proportion. This behavior covered all the three groups and refers to:

1. lack of information on the effects of drugs;
2. lack of efficiency of the existing preventive measures;
3. inefficiency of legal deterrence, i.e., the law does not interfere in the decision of use and traffic of drugs.

Among the people interviewed, we noticed that more than a half stressed the importance of preventive measures, among these, the exact

information on the effects of drugs. Such a position would be in accordance with another previously stated—the need for the law to establish educational programs on drugs in the school sphere.

From the results we obtained, we concluded that the population under study:

1. distinguished between the drug user and the drug trafficker in different categories;
2. in consequence, recommended that the law established prison penalties for the drug trafficker and treatment for the user, taking into account that considerable part of the population linked the drug user to the idea of a sick person;
3. recommended the application of a more severe penalty to the person who induces a juvenile to use drugs;
4. thought it necessary to make the application of the law subject to the individual case;
5. revealed the importance of implementing the use of preventive measures, including the correct information on the effects of the drugs;
6. recommended that the law establish educational programs for schools.

It is of great importance that the law is supported by public opinion. The more efficient detection of illegal acts will depend to a large extent on the cooperation of the population. Thus, it is interesting to compare the conclusions drawn from the opinions of the population under study about the present law.

Accordingly, we can say that:

1. in relation to the preventive measures recommended by public opinion, we observe agreement with the law;
2. relating specifically to the penalties that should be applied to the drug user and drug trafficker, we notice disagreement with the law because of the differentiation made by public opinion between the drug user and drug trafficker.

### **Latin American Strategies**

The impact of the programs of intervention concerning drug addiction, is a point to be considered. It is of interest to know the various realities of the drug problem in other Latin American countries because while drug-control policy is restricted to national boundaries, the dynamics of drug addiction go beyond their respective frontiers.

Eight countries were studied: Argentina, Bolivia, Chile, Columbia, Costa Rica, Panama, Puerto Rico, and the Dominican Republic.



In Costa Rica, there has been a decrease in cannabis use. There has been an alarming increase in alcohol abuse which, however, is not subject to the controls established for the other drugs. In Panama, the problem is restricted to drug traffic, and there has been a decrease in the local traffic in cannabis. In Puerto Rico, there has been a significant increase in the use and abuse of alcohol.

Four of eight countries—Bolivia, Costa Rica, Panama, and Puerto Rico—considered the intensification of repression as a factor which has contributed to a change in the drug-abuse habits. With the exception of Bolivia, all those countries reported a decrease in the use of cannabis. Therefore, it is likely that intensification of the repressive measures has contributed to this decrease, through the improvement of the systems of control in the police, as well as in the health area.

Chile, Colombia, and the Dominican Republic did not attribute the phenomenon of increase in drug use to the intensification of repression, indicating multiple factors of psychic, social, economic, and cultural character, means of communication and other factors. Argentina also mentioned multiple factors which would have an influence on the increase in drug use, omitting any special reference to the value of repression in the face of the problem.

From the things already mentioned we might conclude that repressive measures can be efficient when they are associated with other factors intervening in the problem (prevention and treatment).

It appears that the use of cannabis is observed in all countries except Puerto Rico and Bolivia, the latter having failed to furnish any pertinent information on the subject. There is also a significant increase in alcohol abuse, precisely the least controlled drug in Costa Rica, Puerto Rico, and the Dominican Republic. These results permit us to point out an increase in the use of both controlled and non-controlled drugs. Among the controlled drugs, cannabis takes an outstanding position.

From the information received from some experts we can conclude that the repression of controlled drugs may be linked to the phenomenon of an increase in the abuse of non-controlled drugs such as alcohol.

Chile and Colombia attribute relative value to restrictive measures. Chile considers that the drug user as well as the drug trafficker finds means of breaking the mechanisms of control. By and large the countries expressed the opinion that the more the restriction over certain drugs is intensified, the more increases the use of other substitute drugs.

From the data received, we verified that all countries were unanimous in attributing certain efficacy to the restrictive measures. Thus the positive effects of restrictive measures, when combined with preventive and treatment measures, became evident from the opinions of the experts.

There seems to be uniformity in the policy which guided the opinions

of the experts, as all of them basically recommend the adoption of a global policy of drug control. The combination of efforts in various areas at the level of legislation, police, control, prevention, treatment, professional specialization, scientific investigation is stressed as a necessary factor to obtain more effective results in order to minimize the problem of drug addiction.

## **Conclusions**

In the face of the results which were presented to us in relation to Latin American countries (Argentina, Bolivia, Chile, Colombia, Costa Rica, Panama, Puerto Rico, and the Dominican Republic), we may present our conclusions, even if still incomplete:

1. an increase of the abuse of both controlled and non-controlled drugs was verified;
2. more severe restrictive measures applied to the use of some drugs may influence the increase in the use of others;
3. a more severe repression of controlled drugs may be followed by the phenomenon of increasing alcohol abuse, the least controlled drug;
4. repressive measures aiming at controlling drugs are more efficacious if combined with measures of prevention and treatment;
5. the adoption of a global policy of drug control is required.

# AN APPROACH TO THE CONTROL OF ALCOHOL CONSUMPTION

by Dr. Wolfgang Schmidt and Robert E. Popham

Legal measures dealing with one or another aspect of alcohol use are probably as old as written law. The reasons for such measures have varied through the centuries but, by and large, they were and still are concerned with securing revenue for the state and preventing drunkenness and its consequences.

The extent and strictness of alcohol controls have varied greatly historically and among countries. In some Mediterranean countries we find a relatively *laissez-faire* attitude on the part of governments toward the production, sale, and consumption of alcoholic beverages. In contrast, Scandinavian and North American countries have generated a large volume of complex alcohol legislation which, in Canada and the United States, culminated in total prohibition during or just after World War I. Prohibition was repealed in the 1920s and 1930s and followed by the adoption of diverse measures and systems of control.

Since World War II, there has been an accelerated trend towards moderation of restrictions in many parts of the world and, of late, there are slight indications that this trend may eventually reverse itself again. This apparently cyclic change in the degree of restrictiveness that has occurred in some countries has been attributed to various factors, including the influence of the temperance movement, fiscal interests of the state, and economic

interests of the alcohol industry. The growing current interest in controls seems to be partly the result of research concerned with factors responsible for the variation in the magnitude of alcohol problems in general populations.

### **A New Rationale for the Use of Controls**

Of particular relevance in this respect is the vast amount of evidence that has now accumulated which makes it increasingly clear that the level of consumption in a population is an important determinant of the prevalence of users of hazardous amounts: the larger the amount of alcohol consumed by a population as a whole, the higher will be the number of heavy consumers.

This conclusion has been the subject of much debate. A clarification of the issue is crucial to a discussion of alcohol control measures.

Individual alcohol consumption covers a wide range of doses, from an occasional drink taken to mark a special occasion to the sometimes lethal quantities consumed by alcoholics. Theoretically, these individual levels may be distributed over the full range in many different ways. For example, a relatively high level of general consumption might not necessarily imply a high prevalence of heavy users, and conversely, a lower per capita consumption might not preclude the existence of higher rates of alcoholism. Similarly, increases in general consumption might only imply that alcohol is more widely or regularly enjoyed by social drinkers.

By itself, the average consumption in the population at large doesn't tell us how the drinkers of various quantities are distributed over the full range of possible consumption levels.

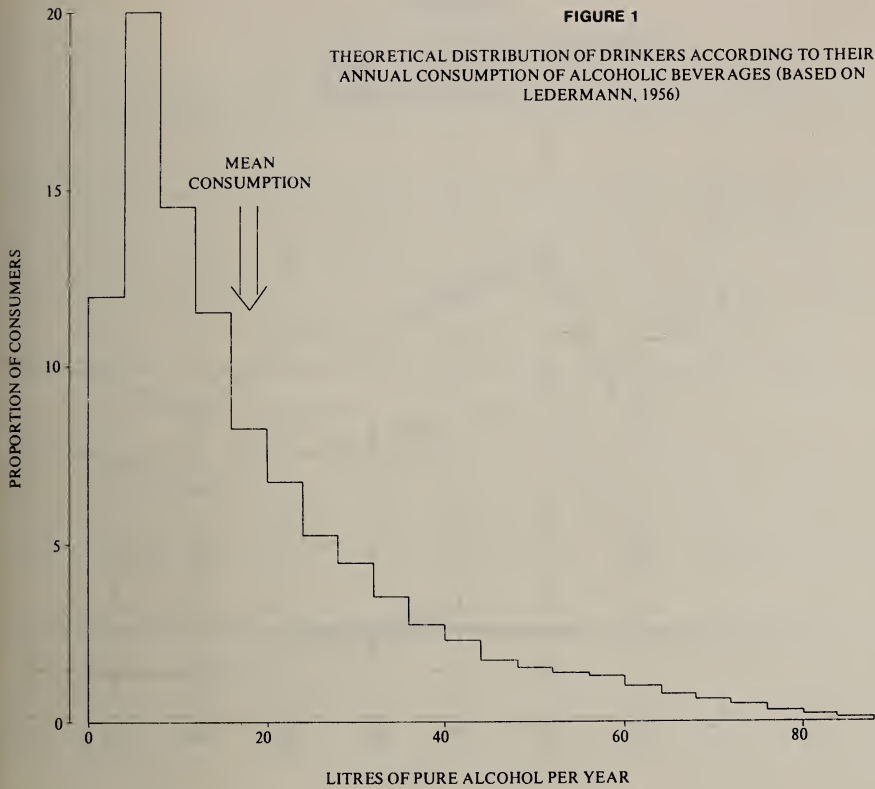
In statistical terms, the crucial question is the nature of the relationship between the average (i.e. per capita) consumption of a population and the proportion of the population consuming excessive amounts.

Ledermann, a French mathematician, was the first to examine this question systematically. He obtained distributions of drinkers according to their average daily quantities of consumption from data that were available in the literature. Although these data referred to populations with quite different consumption means, he found that the consumption distributions had certain characteristics in common.

Firstly, they were highly skewed curves. This finding was not unexpected. It has been known for some time from drinking surveys, case-finding studies of heavy drinkers, and from the application of indirect methods for the estimation of the prevalence of alcoholism, that the proportion of heavy drinkers in any given population tends to be relatively small. Also, a large majority are moderate drinkers. Hence, one would have expected a considerable concentration of drinkers at the moderate levels and a sharp decline in their numbers as the quantities tend towards the excessive. The graph illustrates, in a stylized form, the shape of such a distribution.<sup>1</sup>

1. The graph approximates the distribution of consumption of male drinkers in Ontario in 1972 (m - 17.5 liters of absolute alcohol).





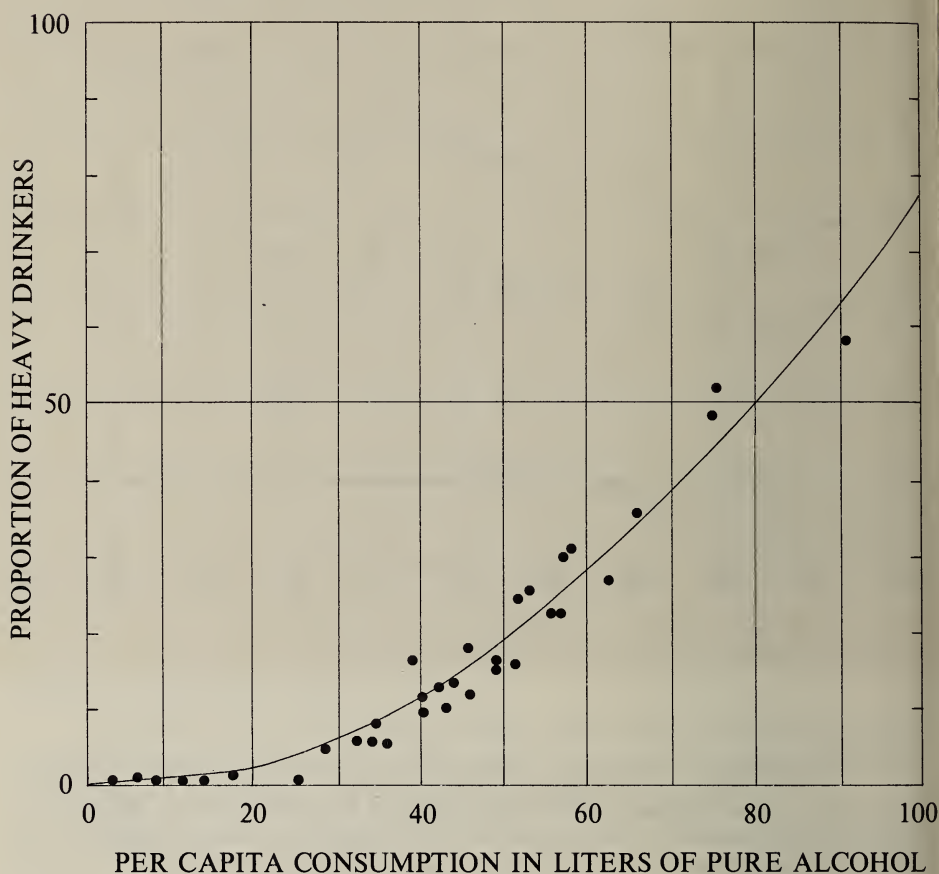
A distribution of this type is described statistically by two parameters—the mean and a measure of dispersion. Hence, the frequency of drinkers at any point, or above a certain point of the consumption range, depends on these two measures. Neither is a sufficient determinant by itself.

The next question to ask is: under what conditions would one expect the proportion of heavy drinkers to vary in the same direction as the mean? Evidently, the answer must be related to the measure of dispersion. For example, a change in the latter may counterbalance a change in the mean so that an increase in overall consumption may have no effect on the proportion of heavy drinkers.

It is with this background that the second of Ledermann's observations must be considered. He found that the measure of dispersion of the several distributions he examined differed very little. The absence of major differences in dispersion provides the empirical basis for the conclusion that the average consumption in a population is a determinant of the rate of heavy use. The implication is clear: when the per capita consumption in a country increases, the prevalence of heavy users is likely to increase as well. This relationship is illustrated in the next figure.

**FIGURE 2**

VARIATION IN THE PROPORTION OF HEAVY DRINKERS\* AS A  
FUNCTION OF PER CAPITA CONSUMPTION AS FOUND BY  
EMPIRICAL METHODS (SOURCE: LEDERMANN, 1964)



\* Average daily consumption of 20 cl and over of pure alcohol.

The mechanism responsible for this apparent invariance in the distribution pattern is not fully understood, but we can speculate as to the fundamental process involved. Ledermann pointed out that, in surveys, drinkers tend to explain their pattern of consumption by comparing it to the consumption of others. He postulated, therefore, that drinking could be thought of as "other-oriented behavior" and that a form of social contagion seems to be responsible for certain consumption levels. Each drinker's consumption influences and is influenced by the level of consumption of other drinkers. Thus, if for whatever reason, the consumption of a segment of the population increases, all segments will eventually be affected.

The conclusions relevant to the issue of prevention through control are as follows:

1. A change in the average consumption of alcohol in a population is likely to be accompanied by a change in the same direction in the proportion of heavy consumers.
2. Since heavy use of alcohol increases the probability of physical and social damage, the average consumption may be expected to reflect the prevalence of such damage in any population.
3. Any control measure which affects overall consumption may be expected also to affect the prevalence of alcohol problems.

### **Problems in the Formulation of a Control Policy**

These conclusions are well substantiated and seem clearly to imply steps which might be taken by governments to control widespread alcohol problems. However, there are difficulties in the formulation of suitable recommendations.

At present, formulation is constrained by unsatisfactory knowledge of the effects of most legal controls. Although the literature is extensive, scientifically acceptable attempts to evaluate the effects of particular measures are seldom encountered. It is now well enough established that very large changes in controls on availability—for example, severe rationing or prohibition, or conversely, major increases in accessibility such as occurred recently in Finland—have a substantial impact on consumption and problem rates. But such effects do not provide a realistic basis for legislative action or policy development. On the other hand, the effects of minor changes in outlet density, closing hours, etc. are exceedingly difficult to measure and so far have not been shown to have an appreciable impact. Yet it seems highly probable that the cumulative effect of many such changes in the same direction over a period of years—for example, the post-World War II liberalizing trend in many Western World countries—represents a major alteration in availability resulting in very great changes in consumption and attendant problems. However, this is formidably difficult to prove because so many other changes nearly always occur at the same time. Indeed, it is probably impossible to determine the separate effects of changes in liquor laws under these circumstances.

The effect of price—which can also be seen as a potential control measure—has been investigated more thoroughly than any other aspect of availability. Generally speaking, it is now clear that alcoholic beverages tend to be like other commodities on the market: consumption is affected by price. This fact would seem particularly relevant in the design of a control policy because the taxation of alcoholic beverages is a universal practice.

However, there are also certain problems associated with price manipulation for preventive purposes. Most important is the consistent finding that the demand for at least one of the three major beverage classes

(beer, wine, and distilled spirits) is largely price inelastic—for example, beer in Ireland, wine in France. This implies that when the price of such a beverage increases, the consumption will be maintained usually at the expense of some other commodity which, in the case of low income consumers, may be a necessity. If, on the other hand, only the price of the other classes of beverage is increased, shifts in demand to the lower priced class are likely to occur, so that overall levels of consumption may be largely unaffected. The phenomenon of substitution is still poorly understood and difficult to study empirically because price changes have usually been similar for the three beverage classes.

### **Limited Policy Recommendations**

Given these difficulties, it would seem that only limited recommendations for a health-oriented alcohol control policy can be justified at this time. We submitted such recommendations to our government in 1973, and do not feel that the evidence accumulated since justifies any changes in these recommendations.

The recommendations were stimulated by the observations that: 1) rates of consumption and attendant problems had risen steadily during the post-World War II period both in Ontario and in most Western World jurisdictions; 2) all indications were that this trend would continue at the same rate; 3) the period in question was characterized by a gradual relaxation of the control system; and 4) the real price of alcoholic beverages had been allowed to decline substantially. The recommendations were as follows:

1. A taxation policy which maintains a reasonably constant relationship between the price of alcohol and levels of disposable income (i.e. income after taxes). For example, if disposable income per capita rose 5% in a year, then the price of each alcoholic beverage offered for sale would be increased by that percentage.
2. A moratorium on further relaxation of alcohol control measures and the adoption of a health-oriented policy with respect to such measures. Essentially, this would mean that future proposals to change legislative or other provisions governing the marketing and distribution of alcoholic beverages would be tested against a health objective: the prevention of further increases in the prevalence of alcohol problems. The relevant question would become: are the proposed changes likely to contribute to higher consumption levels and therefore to an increase in health costs?
3. An education program designed to increase public awareness of the personal hazards of heavy alcohol consumption, the economic and other consequences for society of high consumption levels, and the potential public health benefits of appropriate control measures.



## Problems of Implementation

In many respects, this is a modest proposal. The aim, after all, is to prevent further increases in consumption. No reduction is to be anticipated. Nevertheless, there has been considerable resistance, both intellectual and political, to its implementation. Some find the proposal unacceptable apparently because it does not seek eradication, or at least a major reduction in the prevalence of alcohol problems. The notion of a public health approach aiming only to stabilize is apparently viewed as a contradiction in terms. Our response to this position is that the legislative approach can only be a part of an overall preventive strategy complimentary to educational and treatment approaches. It would be entirely unrealistic—and might well have considerable adverse consequences—to attempt to control the problem entirely by means of taxation and highly restrictive control measures. *On the other hand, it has become evident that education and treatment alone can have little impact when liberalization of the control system and declining real prices constitute forces operating in the opposite direction.*

Another source of resistance has its roots in the widely propagated disease concept of alcoholism which has been seen to imply: 1) that the alcoholic is insensitive to such environmental factors as price and availability, and 2) that alcohol problems are primarily attributable to the alcoholic. These derivative propositions of the disease concept are simply contradicted by a considerable and growing body of evidence. While the evidence cannot be reviewed in detail here, it is certain that levels of consumption far below those typically encountered among clinical alcoholics are hazardous to health. Furthermore, the liver cirrhosis mortality rate—a sensitive indicator of the prevalence of alcoholism—is quite clearly substantially affected by changes in the environmental factors mentioned.

It would seem, then, that many prevalent notions have to be replaced with the new concepts underlying the public health approach outlined. The task of communication is a formidable one. Some of the concepts—for example, the “contagious” character of drinking patterns and the notion of risk of health damage associated with different levels of consumption—are complex and difficult to convey.

Consider a person who uses alcohol in a safe and responsible way—drinking perhaps only two or three bottles of beer a day or the alcohol equivalent in wine or whiskey. We have to convince him that, because of the nature of the distribution of alcohol consumption in his society at large, he contributes importantly to the magnitude of alcohol-related problems, and therefore should support intervention by the state likely to reduce his own access to alcohol.

In this regard, it is instructive to consider attempts to prevent smoking. The health educator has been justified in making the blanket statement that smoking is dangerous to health, since the vast majority of smokers are at significant risk. Among drinkers, the vast majority are not at risk. The educator concerned with smoking, therefore, has the advantage over the

alcohol educator of an unequivocal, easily understood message. Despite this, it has taken some 25 years of campaigning to achieve the impact on the incidence of smoking which we now begin to observe. Clearly, a very long-term commitment will be required to make similar progress in the case of alcohol problems, and even this is unlikely to occur in the absence of legislative reinforcement.

## **A Strategy of Implementation**

In our recommendations to government, we proposed a mass education program with relevant objectives. This proposal was accepted, and the Ministry of Health launched such a program. While there is evidence that it has had some impact, we have begun to feel that an approach involving work at a more precisely targeted level is required as well. For example, there is now a widespread effort underway in this province to encourage large industries to adopt a health-oriented policy with respect to their alcoholic employees. Could not such efforts incorporate an attempt to have these industries develop a more comprehensive policy aiming also at primary prevention?

Locally, in recent years, alcoholic beverages have appeared in executive dining rooms and licenced premises are now found in many office buildings. The day may not be far off when there will be a demand to have alcoholic beverages available in the factory canteen. This is already the case in most high consumption countries.

The cumulative effect of such developments may be expected to contribute to an increase in the prevalence of problem drinking employees. The widespread adoption of a broad policy respecting alcohol use within the jurisdiction of industry might help to forestall such a trend.

There are other large organizations—such as service clubs, military establishments, labor unions, and universities—which might well be approached in this way. Perhaps the Foundation's response to a recent enquiry will help to illustrate the message which one would hope to communicate.

The president of an Ontario university sought the Foundation's opinion as to the pros and cons of opening a pub on his campus. In our reply, the following principal points were made:

1. There is evidence that neither per capita alcohol consumption nor the prevalence of alcohol-related problems such as drunkenness and alcoholism are appreciably (or, at any rate, measurably) affected by *minor* changes in the number of sales outlets per unit of population. On the other hand, a *substantial* change in availability in either direction does have an effect: a drastic reduction is accompanied by a decline in problems of alcohol; a large increase, by a rapid rise.
2. Clearly the university proposal is in the category of a minor change. It involves the addition of a single outlet in an area already well supplied.

Under these circumstances, it is unlikely that any significant increase in adverse effects on the campus population would occur. The main impact would probably be to shift some drinking (and some related problems) from existing outlets to the new one.

3. Given this conclusion, current relatively liberal attitudes towards alcohol use, and the benefits which might be cited in favor of a pub (e.g. revenue for the university, pleasure and convenience for its patrons), it is very likely that the pros will be seen to outweigh the cons.
4. However, there is another aspect to the matter. Until very recently, the changes in the alcohol control system in Ontario over the past 30 years have all been in the direction of liberalization. The trend has clearly been towards the introduction of alcoholic beverages in all aspects of everyday life; that is, towards the alcoholic saturation characteristic of some parts of the United States and Europe which lead the world in the prevalence of alcohol-related health problems.
5. So far, it has not been possible to demonstrate specific adverse effects attributable to any one of these changes taken separately, save the lowering of the legal drinking age (which was followed by an increase in alcohol-related traffic accidents and in clinical admissions for alcoholism). Nevertheless, the conclusion seems inescapable that the cumulative impact has been very great, and highly undesirable from a public health perspective. For example, since 1950, mortality from liver cirrhosis—known to be a sensitive index of the prevalence of alcohol problems generally—has shown the largest rate of increase of any cause among adults in Ontario, and it is now the third leading cause of death among middle-aged males in the province.
6. From this standpoint, it may be argued that the university is contemplating another of the numerous minor changes typical of recent alcohol control history in Ontario, and that the change would contribute to the cumulative effect noted. Also, the change would communicate a message respecting the attitude of the governing body of the university towards the use of alcohol in its community. The message would serve to reinforce the liberalizing trend in our society with the consequences stated for public health. *Thus, the proposed change ought to be seen not in terms of its specific immediate effects, but in a much broader context: the context of a health-oriented university policy respecting alcohol consumption.*
7. The adoption of such a policy would probably encounter many difficulties, not least of which would be the communication of its justification to faculty and students. In the current climate, were this not done well, actions consistent with the policy—involving, e.g. resistance to further relaxation of controls—would likely be written off as a reflection of out-moded puritanism on the part of the members of the university government. In any case it would seem to be well worth the attempt. Recent survey evidence suggests that, contrary to the view which seems to dominate the mass media, there is still a majority in

Ontario who favor controls where health protection can be seen as the underlying rationale.

## References

Since this paper was prepared primarily for verbal presentation, the usual documentation was omitted. The evidence and most of the arguments involved have been discussed in detail in the following recent publications.

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# Remarks

## CONTROL STRATEGIES

by James M.N. Ch'ien

I have learned a great deal from Dr. Amar's paper. The part he omitted because of time deals with a kind of descriptive statistics on the admission figure and discharge figure and the diagnosis categories in São Paulo public and private hospitals.

It indicates that although police investigation, seizure of illicit drugs, and imprisonment of users and traffickers rose generally since 1971, it is the cut-off line of the punitive law. The author concludes that the fluctuation of drug use based on those hospital records was actually influenced by non-legal enforcement factors. In other words, Dr. Amar's analysis is that the Strum Law, No. 5726, is not an effective deterrent or prevention against drug abuse nor against alcohol abuse. But a very important point is that among the juveniles under 18, 57% initiated contact with drugs between the ages of 13 and 18 and 13.5% between the ages of 8 and 12. This struck me as the early sign or warning that WHO has been advising us to be alert to. Therefore, I fully agree that priority should be placed on research in juvenile drug abuse.

What is the effect of the law on the present juveniles? The law does not cover anyone below 18. So when they reach 18, will the law encourage them to become alcoholics or problem drinkers? I don't know, because there are strong measures against drug use and drug trafficking, but nothing about alcohol. So this is an uncomprehensive law. Or as Dr. Amar aptly summarized, a law that is not based on scientific study nor on community attitude.

Another point of his cross-country study I noticed was the shining example of Puerto Rico, perhaps the only country in the world that has a cabinet level Department of Addiction Services. On one hand, they tackle the problem of supply with law enforcement—vigorous law enforcement—and on the other hand they have made treatment and prevention widely available. They were able to reduce the problem; not eliminate it, but reduce it significantly.

Dr. Schmidt and Mr. Popham's paper argues logically and convincingly for the rational control of alcohol consumption through pricing, taxation, and formulation of correct community values. What you value more becomes a value judgment: income for your university or serving as a role model for the younger generation and in the community as a whole.

I agree fully with the conclusions that the larger the amount of alcohol consumed in a population, the higher will be the number of heavy consumers. I think it also applies to other types of drugs.

While admiring Jellinek's pioneering effort in the study of alcoholism, I am very glad to see his concept being challenged. In my opinion, cirrhosis of the liver is indeed a disease, but excessive drinking per se is not. Delirium tremens and other central nervous system disturbances are neural disorders caused by alcoholism. Traffic accidents by drunken drivers are a public health concern. But the drinker and the driver are not sick patients until they land in the hospitals after blacking out or being involved in a head-on collision.

Similarly, I don't think drug abuse itself is an illness. Heroin addicts do not consider themselves sick until they run out of money or run out of dope and withdrawal syndrome develops. Hepatitis and tetanus, associated with mainlining, are illnesses caused by unsterilized needles. Morphine or heroin by themselves do not cause them. It is the dangerous people who abuse these drugs or medicines.

To say alcoholics and drug abusers are sick people, tends to absolve them from their individual responsibility for their own behavior. The analogy can be also drawn to coffee drinking and cigarette smoking.

We in the health profession cannot ignore the economic realities. When the price of coffee rose sharply a year ago, we noticed many coffee drinkers switched to tea or reduced their coffee consumption. When a person's increasing tobacco consumption begins to hurt his family budget, financial pressure or nagging from his wife will force him to reduce his consumption. If we can't make cigarettes, pipe tobacco, and cigars unavailable completely, the best way to reduce lung cancer is to gradually increase the tax on tobacco. Doing this will also make it less attractive to teenagers. Such taxes could be used to finance drug abuse programs, either service or research. I fully agree with Dr. Schmidt's suggestion that alcohol tax should be based on disposable income and the relative price of alcohol compared with other commodities. And I think it should also work with cigarettes and other drugs sold over the counter which could be abused. Dr. Schmidt's contention is that when the

per capita income rises by 5% the taxation should increase also by 5%. My suggestion is that it should increase by 10%, with 5% for the general revenue of the government and a 5% reserve for research and service programs.

I agree with the suggested moratorium to freeze further liberalization trends—evident since World War II in all western countries—until a more rational social policy can be formulated. Senator Keith Davey pointed out very correctly the seriousness of over-saturation of alcohol in all developed countries. Sports events have become drinking orgies.

Concerning the last point made by Dr. Schmidt on education: while agreeing that education should start as early as possible in school and outside school to increase public awareness of the hazards of heavy consumption of alcohol, I think comprehensive health education should start early, including the danger of misuse of alcohol, tobacco, and all other drugs.

And finally, parents and teachers should serve as role models in cultivating socially responsible behavior. They should always play a role in the socialization process of our younger generation, which includes the internalization of the proper values.





**International Collaboration  
in Drug Abuse Programs**



# WHO'S ROLE: CURRENT AND FUTURE ACTIVITIES IN THE DRUG DEPENDENCE PROGRAM

by Dr. Awni E. Arif

The activities concerned with drug dependence are an important part of the World Health Organization mental health program. WHO's program continues to lay emphasis on collaboration with member states in developing national activities concerning drug dependence programs, formulating their drug abuse policy for the management, including prevention, treatment, and rehabilitation of drug dependent persons, epidemiological studies to improve the quality and comparability of data collection, advice on the need for and level of international and national control of dependence-producing drugs, and other research to obtain information necessary for program development. WHO continues to give importance to active collaboration with other organizations of the U.N. system, as well as governmental and non-governmental bodies, in assessing the magnitude and nature of the problems related to non-medical use of drugs and cooperation with countries in measures aimed at the prevention and management of such problems.

WHO responsibilities emanate from the World Health Assembly, executive board and regional committees and the international treaties. Numerous resolutions adopted by the World Health Assembly provide both policy and priority directives for the implementation and conduct of activities in the field of alcohol and drug dependence.

## **WHO Objectives and Priorities**

One of the most important functions of WHO, which falls within its coordinating role, is the international transfer of information on health

matters. The organization is used as neutral ground for abstracting, distilling, synthesizing, and disseminating information on practical problems and ensuring that such information is made available to those requiring it.

Within the overall priorities of WHO as expressed by the Director-General and the Mental Health Program objectives, the objectives in the field of drug dependence are to cooperate with countries in order to:

1. increase the effectiveness of health and social service delivery systems in developing effective low cost approaches to treatment and rehabilitation of drug dependent patients;
2. develop strategies for treatment and prevention through primary health care and within the framework of country health programs in countries where little or no health or social care system exists;
3. coordinate international research in drug dependence;
4. strengthen the planning of effective prevention and control programs through the international collection and exchange of data in the epidemiology of drug dependence;
5. ensure that adequate and relevant training programs are provided to meet manpower needs, especially in developing countries;
6. work in partnership with other United Nations agencies and organizations which have direct responsibilities in the field of drug problems;
7. fulfil the responsibilities identified within the International Conventions concerning drugs;
8. establish an effective coordinating mechanism whereby knowledge and experience available in non-governmental organizations and developed centres of excellence in the field, may be more effectively transmitted and adapted to those countries and/or regions where technical and human resources are meagre.

### **Planning and Implementing WHO Collaborative Programs**

The global nature of the problem and its negative impact on social, health, and economic development, particularly in developing countries, the rapid change of patterns of drug use and types of drugs used from country to country, and other known characteristics of the phenomenon, require great flexibility in the planning and development of appropriate responses.

Some of the important factors to be considered when planning and implementing a program on a country level in the field of drug dependence are as follows.

Taking into consideration WHO's important role as international coordinator in the field of health, and because of the considerable gap in resources, knowledge, and experience in the field of drug dependence between developed and developing countries, undoubtedly countries can



benefit from a well-organized, international system for exchange of information and experience. Therefore, one of the basic principles in developing a program is to select and adapt the experiences of other countries to the needs, resources, and social, health, and cultural system of the country.

There are three basic factors which must be considered in the use of any drug—the drug, the human being using the drug, and the social and cultural context in which the drug transaction takes place. Any model of intervention based exclusively on any one factor is not likely to succeed and everyone is well aware of the complexity of each of these elements.

A second basic principle is the integration of drug dependence services with other existing services. Provision of services for treatment and rehabilitation of drug dependent persons should be, wherever possible, integrated with other health, welfare, and economic development programs. The magnitude and nature of the health and social damage from drug abuse has to be assessed within the context of, and measured against the overall health, social, and economic problems in the country. In many countries, particularly the developing ones, manpower and financial resources are limited. Where many other health and social problems require urgent attention, it would be unwise to establish specialized institutions exclusively for treatment of drug dependent patients. Specialized institutions and facilities are recommended for the purpose of research, development, and testing of pilot programs and training manpower.

The third principle is training manpower required for implementation of drug dependence programs. While there is a need for some specialists in clinical research, epidemiology, and program planning, other health and social workers could be trained to apply their specific skills. In many developing countries, it is unrealistic to develop a wide range of specialists exclusively for the program. Medical assistants, primary health care workers, community nurses, and other health auxiliaries, could be trained in the field of drug dependence in order to carry out their tasks under the supervision of a physician and others with advanced training. Other professionals outside the health field, such as welfare workers, teachers, police, and recovered patients, can make valuable contributions to both prevention and treatment programs.

The fourth principle is collaboration and coordination with other WHO program activities at a country level. Steps are being taken to coordinate activities concerned with drug dependence with a number of other WHO programs that have important contributions to make in assisting countries to plan and develop appropriate health and social services. The accumulated knowledge and experience gained from working directly with many countries in planning and developing health programs for under-served populations, combined with the technical knowledge about drug dependence, could provide a strong foundation for developing basic programs at the country level.

## **Collaboration with Primary Health Care**

Many of the rural, agricultural areas where opium is produced, have little or no health service. Frequently opium is the only medicine available and, therefore, it is used widely for symptomatic relief of pain and illnesses. In these areas, eliminating opium production, without providing alternative systems for treatment of the illnesses common to the region, is insufficient.

Primary health care is a high priority WHO program. Its fundamental purpose is to assist the people in a community to develop basic health services in areas where none now exists. In the primary health care program, the community itself develops resources and the primary health workers are drawn from the community and thereby retain a close identification with the people they serve.

Primary health care consists of simple and effective measures, in terms of cost, technique, and organization, which are easily accessible to people requiring relief from pain and suffering and which improve the living conditions of individuals, families, and communities. The programs should be based on scientific knowledge and health technology, as well as accepted and effective traditional healing practices. These two dimensions should generate simple methods and techniques which are appropriate, inexpensive, acceptable, and easily handled by the health personnel working at the community level, using modern chemotherapy and other techniques to replace the current reliance on opium. Moreover, the primary health care worker could also be trained to provide treatment and aftercare service for opium-dependent persons.

One of WHO's priorities is to assist countries in the development of primary health care programs as an integral part of country health programming. The organization is, therefore, in a strong strategic position to provide greater attention to problems of drug dependence within the context of collaboration with countries in planning and development of health services.

The fundamental need is for the country health authorities to decide whether or not drug dependence is a serious social-health problem. If so, then a national program for drug dependence should be formulated, based on the best available data and a realistic assessment of the resources available in the country.

## **Collaboration with the WHO Health Education Program**

Behavior and attitudes conditioned by culture, by the social, economic, and family environment, and by learning, play a direct role in the development and spread of drug use and drug dependence. Education about the use and misuse of drugs constitutes an important, indeed necessary, part of a comprehensive plan either to prevent further increases or to decrease the current non-medical use of psychoactive drugs. This would need to be carried out in schools specially integrated with other health and psychosocial topics,

in communities and in connection with non-formal education of out-of-school youth and adults. This falls well within the framework of health education activities of WHO, which has the general purpose of "making health a valued individual and community asset." This concept assumes that success in prevention and control of any disease depends *inter alia* on an informed and motivated public.

### **WHO Collaborative Drug Dependence Program at a Country Level**

During the past few years several major collaborative programs have been developed on a country level. These include programs in Afghanistan, Burma, Egypt, Iran, Malaysia, Pakistan, Peru, Thailand, and Vietnam.

In these programs the major emphasis of current work is on the development of effective treatment programs in developing countries using operational research to optimize the use of resources. The objectives of these programs are to develop at national and local levels, flexible and dynamic management systems which will assist in the prevention and reduction of non-medical use of drugs. The approach involves: the training of key personnel through fellowships; epidemiological surveys in rural and urban target communities; and the introduction and systematic evaluation of treatment programs. In addition to the development of more realistic and effective treatment approaches, these activities are expected to contribute to knowledge about the etiology and nature of drug dependence problems.

In the implementation of these programs WHO staff at headquarter, regional, and WHO representative level, are actively collaborating with the national authorities.

### **Thailand—Hill Tribes**

The WHO collaborative program in Northern Thailand in the field of drug dependence and research is one of the activities in the Hill Tribe area that is of great interest. The objective of a survey conducted there was to gather basic information for the selection of working sites for developing the Hill Tribe treatment activities.

The working strategy was to carry out a survey on identification of opium users among the villagers. It covered a general health examination and provided medical services to all villagers. Enquiries about opium use were an integral, but not distinct, part of the survey. The survey included questions about opium use and its consequences on health, as well as the socio-economic aspect. It also took into account the tradition and culture of the Hill Tribes since this has a bearing on opium use and its consequences.

After initial pilot testing in seven villages, four survey forms were devised, one on general health examination, a second on household surveys, a third on opium use, and the fourth on health needs and attitudes. Urine samples were collected from all villagers and tested for opiates. The method



employed for testing of samples was quantitative radioimmunoassay in order that in-depth evaluation could be made on opium users.

The result of this survey can be summarized as follows: the villagers can be categorized into three classes—opium addicts, occasional users, and non-users.

The non-users included those who showed positive results in the urine test through unconscious consumption, either from contamination of foodstuff, particularly rice, or from environmental contamination i.e. they had been with opium smokers. The rate of opium drug dependence in the villages varied from 6% to 35% of the population over 10 years of age. They are mainly between 16-75 years of age with 92% over 30 years of age. The male to female ratio was three to one. The average amount of opium used was 4.5 grams per day.

The reasons for opium use can be classified in three groups:

1. *As a medicine for treatment of various common ailments:* 80% of the drug dependent persons stated that opium was used as a drug for diseases and that repeated use led to their dependence. The most common diseases are fever, abdominal pain, diarrhea, cough, and enteritis. The survey also showed that opium was used for chronic and incurable diseases, peptic ulcers, pulmonary tuberculosis, and urinary disturbances. General aches and pains from overwork and poor health was also a major reason for frequent opium use.
2. *As a means of escape:* Opium smoking is used as a means of escape from mental stress. Socio-economic stress also plays a role in the increased incidence of drug dependence in some villages.
3. *As a means of recreation:* In one of the tribal villages, Meo, during the New Year festival, and funerals, opium was served to guests.

It was concluded from this survey that modern medical services were practically non-existent. Poor personal hygiene and environmental factors were responsible for several health problems. Sanitation was also poor and fecal contamination of soil caused parasitic diseases such as hookworm, bindworm, and pinworm, which are very prevalent among the villagers. Improvement of the water supply and latrines in houses could contribute to better health. Preventive programs, particularly in the form of vaccination, could play an important role in decreasing the incidence of communicable diseases.

Following the completion of the survey, a program is being prepared to introduce primary health care in some of the Hill Tribe villages. This program is mainly dependent on training some selected members of the villages as health auxiliaries who could take care of simple illnesses under the supervision of a physician from the nearby town. This new program will be introduced as one of the activities of the WHO/Thai collaborative program on drug dependence in 1978.



To rid the villagers of their opium habit is a difficult and complex task. The availability of medical care alone would not stop the villagers using opium, therefore the "medical care approach" must be combined with health education, the realization of the harmful effects of opium addiction, and crop substitution.

In addition to WHO country collaborative programs, there are other specific activities in the field of research, workshops, and seminars, including a study on the long-term effects of cannabis use in man, research on maintenance of narcotic-dependent persons in Iran, and research on dependence-liability of thebaine derivatives.

## **Epidemiology of Drug Dependence**

The WHO program on the research and reporting on the epidemiology of drug dependence began in 1975. Its objective is to strengthen the planning of effective prevention and control programs through the international collection and exchange of data on the epidemiology of drug dependence.

The initial activities have been organized around three study areas. The first involves the testing of an epidemiological case reporting form for collecting "minimum essential" data on drug users in contact with treatment and other institutions. The form was tested on drug users in seven countries (Burma, Canada, Indonesia, Malaysia, Mexico, Pakistan, and Thailand) and the results were reviewed by collaborating investigators in October 1977. The objective of the second study is to develop a general methodology for evaluation of drug dependence treatment; the instruments and methods have been tested in evaluation studies of treatment programs in several countries. The third study involves the testing of self-administered drug use survey instruments on students in nine countries. The use of these instruments will permit comparisons of data in this important area of epidemiological research.

## **Other Major WHO Responsibilities**

The Single Convention on Narcotic Drugs of 1961 simplified and unified the earlier treaties and continued to assign to WHO the role of evaluating drugs and making recommendations to the United Nations Commission on Narcotic Drugs.

This convention continued to control drugs obtained principally from plant material, i.e. opium, cannabis, and coca leaves as well as morphine-type synthetic drugs.

The increasing availability in recent years of a large number of synthetic psychotropic substances has led to their widespread abuse in many parts of the world. Concern about this problem led to the ratification of the Convention on Psychotropic Substances, 1971, which came into force in August 1976. This Convention requires WHO to recommend to the U.N.

Commission on Narcotic Drugs whether a psychotropic substance is to be controlled nationally and internationally and how. The recommendations of WHO are determinative as far as medical and scientific evidence is concerned.

Under the 1971 Convention on Psychotropic Substances, 32 substances were placed under four schedules. Schedule I contains hallucinogens, subjected to strict control measures, stricter than narcotics and substances in Schedule II (generally amphetamines and similar stimulants), Schedule III (generally shorter-acting barbiturates and similar CNS depressants), and Schedule IV (generally longer-acting barbiturates and similar CNS depressants and minor tranquilizers which are successively less strictly controlled). The basis for recommending control of psychotropic substances is their dependence liability, abuse potential, and actual abuse on the one hand, and their therapeutic usefulness on the other.

The testing and evaluation of drugs in general and psychotropic substances in particular is complex technical work and requires considerable expertise. Nevertheless, the Convention provides a mechanism for the international community to decide as early as possible whether a substance creates a drug abuse problem so that remedial steps can be taken.

## **Drug Dependence and Alcohol-Related Problems**

One anomaly of the approach to drug problems within the United Nations system is the arbitrary separation, by some agencies, of alcohol-related health and social problems from problems associated with other drugs. The focus of concern of both the United Nations Commission and the United Nations Division of Narcotic Drugs is intimately related to the requirements of the International Conventions, which have been interpreted to exclude considerations of problems related to alcohol.

Alcoholism (now termed more precisely, "alcohol dependence syndrome"<sup>1</sup>) as a public health problem has always been a concern of the World Health Organization, which regards it as a specific type of drug dependence. Therefore, WHO has encouraged countries to consider, in planning and implementing of programs, all drug-related problems together with those related to alcohol.

In 1966 an Expert Committee on Services for the Prevention and Treatment of Dependence on Alcohol and Other Drugs, agreed that "while the extent and nature of the problem, i.e. type of drug dependence and patterns of use and abuse, vary widely from country to country, the relatively frequent transfer from one drug of dependence to another, the not infrequent abuse of drugs in combination, the complex and changing patterns of abuse, and the rapid development of new drugs with potential for abuse, make it important that dependence on alcohol and other drugs be

1 This term replaced "Alcoholism" in the *Ninth Revision of the International Classification of Diseases*, adopted by the Twenty-ninth World Health Assembly, 1976.

considered as facets of one problem, psychic dependence of various kinds being the common factor.”<sup>2</sup>

In the same report, differences between approaches to alcohol and drug dependence are noted. “A combined approach to alcoholism and drug dependence does not apply equally to all aspects of the problems. Differences in local conditions, such as social structure, personal and cultural attitudes, and the incidence and prevalence of dependence on various agents have to be taken into account. In general, a combined approach will apply most usefully to research and will be less applicable to control measures, with treatment and education falling in between.”

One of the WHO projects in this field is a three-year research program which has been implemented is the first stage of a project concerning community involvement in improving responses to alcohol-related problems, including disabilities. The long-term hypothesis is that research, within a specific community, on the types and extent of such problems and current ways of coping with them will promote the community’s development of a more adequate response. This would be tested in a subsequent study.

1. The immediate research objectives are to describe and measure in selected communities:
  - i) drinking patterns, alcohol-related problems and disabilities, and psycho-social and economic repercussions;
  - ii) current responses to such problems, including community attitudes to drinking and the ways the community in general and specific agencies (health, welfare, labor, educational, legislative, correctional) deal with the problems.

Communities will be selected within countries<sup>3</sup> expressing concern about increasing problems related to alcohol consumption. An attempt will be made to examine the possible causes (including socio-cultural change) and means of preventing such increases. In order to extend the applicability of the research methods and findings communities with different socio-economic structures will be selected, initially in three areas, in each of which two distinct communities can be studied (e.g. urban/rural); and investigators likely to carry out similar studies in other parts of the world will be invited to participate in discussions on the development of the project.

The research will be coordinated through WHO Headquarters with the help of WHO regional offices, but main reliance will be placed on local resources for the community research. In each area, this will comprise a series of interlocking studies including: national and community background reviews through analysis of published material, discussion, and observation; study of population experience, problems, and attitudes related to alcohol consumption through sample population survey and/or key-information interviews; study of agency responses to alcohol-related problems through observation and interviews of agency staff and clients; case-histories of

2 *Wld Hlth Org. Techn. Rep. Ser.*, 1967, No. 363, p. 8 & 9

3 Countries chosen are: Mexico, Zambia, Scotland—Canada and USA also collaborating on a self-financing basis.



individuals with alcohol-related disabilities and their families through assessment and follow-up of subsamples of the population.

It is expected that, by the end of the three years, each community project team, working with a group of concerned community members, will have been able to fulfil the second objective. This is: to establish a comprehensive plan for ensuring more adequate community response to the alcohol-related problems revealed by the above research.

It is assumed that international exchange of relevant findings and experience will promote achievement of the underlying objectives.

## **WHO Collaborating Centres**

In addition to other activities, WHO has made efforts to establish an effective collaborative relationship with a number of well-developed centres of excellence in the field of drug dependence, as well as in other areas. So far three centres have been designated as WHO collaborating centres for research and training in drug dependence; the Addiction Research Foundation, Toronto; the Centro Mexicano de Estudios en Farmacodependencia, Mexico; and the National Institute on Drug Abuse, Rockville, USA. Three other centres are under consideration for designation as WHO Collaborating Centres, in Asia, Europe, and the U.S.

The objectives of this strategy are:

1. To develop through WHO leadership, a coordinating and planning mechanism whereby the resources of knowledge and experience at present residing in developed research and training institutes and institutions in the field of alcohol and drug dependence may be applied, possibly after appropriate modifications, to maximum benefit elsewhere, especially in developing countries.
2. To promote international collaboration in research and training in priority areas.
3. To bring the attention of scientists and institutes to the needs of developing countries and priority areas which are not being adequately supported or researched.
4. To assist WHO in a review and evaluation of various policies and programs for the reduction of the demand for and supply of drugs, including alcohol.
5. To assist WHO in carrying out research studies and testing the dependence-liability of drugs.

The responsibilities of WHO will be:

1. Determination, in collaboration with countries, of overall priorities in research, training, and services.
2. Selection and development of centres which will collaborate in the programs.



3. Assistance in selecting and placing trainees in appropriate training programs.
4. Cooperation with the designated centres in organizing special training opportunities designed to meet specific needs with particular reference to developing countries.

## Coordination with the United Nations System

The objective of all U.N. agencies concerned with drug dependence problems is the control of drugs of abuse, including prevention and treatment. Coordination between WHO and other agencies is achieved not only through informal daily collaboration with the U.N. Division of Narcotic Drugs, the International Labour Office, and the U.N. Educational, Scientific and Cultural Organization, but also through the Inter-Agency Advisory Committee on Drug Abuse Control, which meets once a year to review regular progress reports from agencies executing various projects. This Committee ensures that the various components of the comprehensive drug abuse control programs, including health, law enforcement, and crop substitution, are effectively coordinated at the country level.

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# OBJECTIVES, PRINCIPLES, POLICIES, AND PROBLEMS OF PROGRAM DEVELOPMENT

by James M.N. Ch'ien

Traditionally, drug abuse programs at the community or national level are often developed as crash programs to meet pressing social problems or in consequence to a crisis.<sup>(1)</sup> Seldom have the program planners the time or opportunity to study and analyze the problems thoroughly and to formulate objectives and policies through research before program implementation. Public opinion and the legislative as well as the funding process often demand something be done quickly. Planners and administrators usually consider themselves fortunate if there are models to follow or programs in neighboring countries to observe to help their own program development. Presently there is no data available to show how such international visits and bilateral modeling contributed to program planning in different countries, but through my own observation I have seen the former Public Health Service Hospital at Lexington, Ky. copied extensively until the early 1960s outside the United States for in-patient treatment, Synanon of California serving as a proto-type of therapeutic communities in many parts of the world after the mid-1960s, and the methadone maintenance program pioneered by Nyswander and Doyle of New York copied by many countries in the 1970s. As to preventive programs, it was interesting to note that many communities started out more or less uniformly with the "scare approach," eventually changed to an "information approach," but found neither approach satisfactory.<sup>(2,3)</sup>

It seems that in attempting to benefit from other countries' experience in dealing with drug abuse, we have informally or haphazardly learned from each others' accomplishment but not from each other's mistakes. Models have been transplanted without consideration of cultural differences or

manpower requirement and "new" methods have been adopted without objective evaluations of their costs and benefits. Therefore, in supporting international collaboration, I wish to propose the following statement: "International collaboration in drug abuse programs aims to promote purposeful exchange of scientific information, professional knowledge, research data, and working experience to benefit from each other's success as well as failures and to share facilities, resources, and expertise for manpower training, preventive education, social legislation, and coordinated research." The principles, policies, and strategies involved are outlined here according to the major areas of research, treatment, prevention, and self-help to stimulate group discussion.

### **Collaborative Research**

According to the experience of the U.S. Department of Health, Education & Welfare, which has supported social research in developing countries through the Special Foreign Currency Program since 1961, many advantages and mutual benefits have been derived from such cooperative efforts.<sup>(4)</sup> They are summarized below to illustrate why similar efforts are needed in our study of drug abuse. First, regardless of differences in culture, ideology, politics, and economy, there is a universality in the way that human needs are perceived. Second, a number of social-welfare research and demonstration projects can be conducted more economically outside of North America and some research problems are more amenable to investigations in developing countries. Third, a number of innovative or demonstrative programs overseas were found highly successful which warrant attention for adoption in the United States. Fourth, social welfare programs in the U.S. as well as abroad have benefitted from the findings of cooperative research and the professional relationships thus established have resulted in a multiplier effect of research methodology. Fifth, preventive programs rather than curative or remedial ones were demonstrated in and recommended for countries with limited resources; evaluation of such programs indicates that industrialized and developed countries could take advantage of such a preventive approach or readjust their priorities for research and service delivery. And sixth, although most international studies were conducted independently, their results frequently reinforced each other's finding. A few centrally planned projects further demonstrated the value of multi-national studies (e.g. comparative research on aging and on delinquency) which provided basis for comparative data collection and analysis and stimulated further international collaboration in dealing with social problems.

In the field of drug abuse, international collaboration until very recently was largely limited to conventions and treaties which were mostly oriented toward law enforcement. From the first Opium Congress in Shanghai of 1909 and the Geneva Convention of 1931 sponsored by the League of Nations to the Single Convention on Narcotic Drugs of 1961 and more recently the Convention of Psychotropic Substance of 1971, the concern was with the



international control of production and distribution of drugs of abuse.<sup>(3)</sup> The creation of the United Nations Fund for Drug Abuse Control in 1971 reinforced the effort of the World Health Organization to give equal attention or more balanced emphasis to treatment and prevention. However, at the individual country level, the top priority still rests on law enforcement and supply reduction. In 1975 I attended a workshop on Future Trends in Drug Use and Abuse at Geneva, sponsored by UNFDAC, and was glad to see the following paragraphs written into the concluding report.<sup>(5)</sup>

*Up to the present, principal attention had been given to the reduction of supply and the suppression of illicit traffic. To restore the balance, more efforts should be directed to programmes for the reduction of demand, to assist both the individual country which initiates the programme and other countries as well, by curtailing the market for production and distribution.*

*In order to be able to estimate future incidence of drug abuse, more research had to be done to identify the nature and scope of the problem. Simple standardized methods should be developed, capable of application in both developed and developing countries for monitoring drug abuse, at least patterns and trends. It was possible to do this within a reasonable time frame. In this connection a manual on drug-abuse assessment for the use of national authorities and instruments for research on epidemiology of drug abuse were being prepared. Information from many sources, public and private, should be used. Methodology for data collection and analysis should provide means to measure not only the extent of drug abuse but also the impact of intervention programmes. Early action to identify new patterns of drug abuse was important, especially in developing countries, to assist in designing effective and integrated programmes.*

Since the said meeting, the WHO has designed an epidemiology study of drug dependence to gather information on patients in treatment from nine official agencies located in as many countries by the use of a standard form and the U.N. Division of Narcotic Drugs has drafted a manual on drug abuse assessment which should help all interested governments, *inter alia*, to choose the most suitable method for data collection and analysis. Both of these pioneering efforts indicate the awakening at last of national and international authorities to the importance of cooperative and collaborative research.

While cheering such international leadership in drug abuse data collection and trend assessment, I would like to point out that there are certain drawbacks and limitations in government-to-government collaboration in research. For one thing, political considerations may affect the quality of official government reports because the authority in power may wish to present a more favorable picture than the realities in consequence to a change of policy or administration especially in the developing countries (e.g. martial law has been credited as the panacea to reduce and prevent drug abuse in some Southeast Asian countries). For another, sometimes there are different opinions and conflicting interests within a government (e.g. military, police, health, welfare, judicial and foreign affairs) for which compromised figures

are reached at the expenses of scientific or empirical data collection and analysis.<sup>(5)</sup> Furthermore, previously proclaimed policies and published reports often cast a strong influence on current studies or surveys and official interpretation of epidemiological or health sciences terminology may be so different or confusing that only a perfunctory report will be released (e.g. some countries which claimed to have no drug addiction problem in the past may refuse to acknowledge alcohol and non-opiate abuse as a problem worthy of reporting to U.N. or WHO). And because of bureaucratic inefficiency, current reports may not be kept up to date or prepared competently (e.g. the traditional reporting on narcotic addiction to U.N. done by some countries annually tended to be late or incomplete).

In contrast to the cumbersome inter-government surveys and communication, the *International Journal on Addictive Diseases* recently devoted a whole issue to a private study carried out with the collaboration of individual experts in 25 countries. The study truly assesses the drug abuse situation in each respective country and presents a realistic trend internationally (e.g. the decreasing level of opiate consumption through the oral or respiratory route but a corresponding increase of intravenous injection of heroin.)<sup>(6)</sup> As one of the contributors, I learned that the study was done more economically and quickly than any official undertaking of similar scope could manage. Clearly it may be wiser and more economical for U.N. or international authorities to support such non-governmental scientific studies than to attempt to conduct every survey through official channels. Therefore, the timely affiliation of WHO with the Addiction Research Foundation of Toronto as a collaborating centre for research, which brought so many experts from different countries together, will certainly contribute a great deal to the advancement of the knowledge and understanding of drug abuse internationally.

### **The Hong Kong Experience**

In Hong Kong, an official white paper published in 1959 gave a shocking estimate of as many as 250,000 narcotic addicts among a 4,000,000 population. This figure was subsequently used to justify the repeated expansion of both the police force and prison service.<sup>(7)</sup> However, by the late 1960s or early 1970s when treatment and prevention were receiving more attention, the official estimate was reduced to 80,000 from 100,000 male addicts without any explanation of the downward adjustment.<sup>(8)</sup> Referring to a 1974 publication of the U.S. Special Action Office for Drug Abuse Prevention (SARDA) on drug abuse epidemiology, I selected the Indicator-Dilution Method<sup>(9)</sup> to estimate the prevalence of opiate dependence in Hong Kong. Using the registration with SARDA for treatment by voluntary male patients in 1973 as the base line I have since arrived at the following figures annually:

$M_1 = 2,386$  (1973 registered applicants)

$M_2 = 3,306$  (1974 registrants)

$X_1 = 157$  (1973 registrants duplicated in 1974)

$$\text{Prevalence} = \frac{M_1 \times M_2}{X_1} = \frac{2,386 \times 3,306}{157} = 50,242 \text{ cases in 1974}$$

Similarly, prevalence in 1975 was estimated to be 50,579 cases. The estimated prevalence in 1976 showed a 5.7% increase up to 53,466 cases. Applying the same formula to women patients, the estimated prevalence remained at a steady level of about 1,300 cases only during the same period. Allowing that a small number of affluent opium smokers would not seek nor come into contact with treatment, I do not believe that the total number of opiate dependents in Hong Kong has ever exceeded 60,000 in any given year. We are now fortunate to have the service of an American consultant recently coming to help us to revise and to computerize the central registry of drug abusers which, in a year or two, should be able to provide more accurate data on both incidence and prevalence of different types of substance abuse in Hong Kong. Data analysis based on the improved registry should also provide a check of the validity of the Indicator-Dilution formula as applied above.<sup>(10)</sup>

Besides the above-mentioned technical assistance from the U.S. government, the Alcohol and Drug Abuse Research Center of the Harvard Medical School, and of the McLean Hospital, Belmont, Mass. I took advantage of the sampling and clinical facilities of the SARDA to conduct a study on the effect of chronic heroin use on male hormone process in 1973 the findings of which were published in Hong Kong in 1974<sup>(11)</sup> and U.S.A. in 1975.<sup>(12)</sup> The fact that plasma testosterone level was severely suppressed by heroin and partially by methadone, but after protracted abstinence of six months or more that the great majority of subjects were able to normalize their hormone level, helped refute the popular myth in the Orient that heroin was an aphrodisiac and encouraged many rehabilitated addicts to remain drug-free. Meanwhile, the National Institute of Drug Abuse became interested in SARDA and after a few visits by senior officials, suggested we formulate a proposal for controlled experimental study on the use of acupuncture and electric stimulation (AES) to detoxify heroin dependents. Following two years of planning and negotiation, an independent demonstration project to test the efficacy of out-patient treatment with the AES procedure is now being conducted with the joint support of both the U.S. and Hong Kong governments. Experienced social workers from SARDA are seconded to the project to render both intake and after-care services and to make follow-up evaluation of the social functioning capacity of the different groups of voluntary patients, including those detoxified by AES procedure, those detoxified by orthodox methadone therapy, and those detoxified by a combination of the experimental as well as the orthodox procedures.<sup>(13)</sup> At the end of the one-year follow-up period, all participating patients will be assessed according to the same criteria—drug-free or drug-use status, change in occupational/vocational status, involvement in criminal activities, and improvement or lack of improvement in family relationship. This should certainly clarify the doubts about acupuncture treatment and help ascertain its effects not only on physical dependence on narcotics but on psycho-social dependence as well.

Since the end of World War II, when Hong Kong only had an estimated 500,000 people, an unprecedented population explosion, mainly through the



influx of refugees from mainland China, has caused the population to increase nine-fold. With about 4.5 million people now living within 404 square miles, Hong Kong's rate of urbanization, industrialization, and economic growth in the past three decades are simultaneously a miracle and a nightmare. In spite of the lack of natural resources, Hong Kong's free-enterprise economy is perhaps the most thriving in southeast Asia and its currency, next to Japanese yen, the strongest in Asia (Hong Kong has been contributing annually to UNFDAC HK\$100,000 which was equivalent to US\$20,000 two years ago but now is worth US\$21,050). To social scientists, Hong Kong is an ideal laboratory to study all kinds of urban ills—environmental, health, and human problems. On account of its compact situation, follow-up studies can be made conveniently and economically. For drug-abuse treatment, voluntary effort long preceded government programs and for many years the medical and health authorities strongly opposed any form of ambulatory service to narcotic dependents.<sup>(14)</sup> Following my observational visits to different out-patient programs in North America in the late 1960s and immediately after an international symposium on drug dependence, held in Hong Kong in 1970, SARDA initiated a scheme of methadone maintenance on an out-patient basis which we named the optional Pre-admission Methadone Stabilization (abbreviated as PAM in our report). This short-term maintenance project demonstrated that narcotic dependents could benefit from ambulatory clinical service as well as psycho-social counseling even before detoxification. This was contrary to previous belief in Hong Kong.<sup>(15)</sup> Two years later, another voluntary agency, the Discharged Prisoners Aid Society, launched early in a three-year, double-blind study of methadone maintenance under the directorship of an American missionary doctor, the strictly controlled protocol of which has not been seen elsewhere.<sup>(16)</sup> Shortly thereafter, the medical and health department set up its own pilot scheme without control groups and decided in 1974, before the conclusion of either studies, to establish methadone clinics all over Hong Kong and Kowloon to meet the need of an anticipated "heroin famine."<sup>(17)</sup> There are now 16 government methadone clinics rendering maintenance and detoxification programs in Hong Kong, some of which are staffed by both medical and social workers and some of which dispense methadone without any counseling or supportive services. In my opinion, the quality of service has been sacrificed unwittingly for the sake of rapid quantitative expansion in order to catch up with a politically determined target to make so many treatment slots available quickly. Consequently, attendance and retention rates are falling off at some of the clinics and in the long run it may prove to be more efficient to have fewer but better facilitated centres than to keep so many half-empty clinics open. A multi-modality approach has been accepted as the official policy under which many different government-run and publicly or privately funded programs exist side by side without, but still in want of, formal linkage. The task of evaluation and co-ordination now falls on the shoulder of the narcotics commissioner, appointed two years ago without adequate supporting staff. He is trying his best to rationalize law-enforcement treatment and preventive programs and



to achieve problem reduction through a balanced approach of attacking both the supply and demand aspects of opiate dependence. Some far-sighted joint planning would have made his task easier. Nevertheless, the machinery of a standing committee has been established and a will to cooperate has been fostered at long last.

### **Self Help and Reciprocal Altruism**

Urban ghettos and crowded areas are often described as breeding grounds for crime, delinquency, and drug abuse. Scientific studies, however, indicate that the causal factors of such dysfunctioning or deviant behavior are mostly psychological and social in nature.<sup>(18,19)</sup> Therefore, environmental manipulation as part of our preventive and rehabilitation efforts must aim to meet both the physical needs for decent housing and the psycho-social needs of our target population. Young people require social support to cope with the growing pains and life stress inherent in an urbanized society.<sup>(20)</sup> In order to promote adjustment to his environment of working and home life and to change his undesirable lifestyle to a more constructive one, a treated drug dependent also requires: information or action leading the subject to believe that he is cared for and loved; information or action leading the subject to believe that he is esteemed and valued; information or action leading the subject to believe that he belongs to a network of communication and mutual obligation.

Simple as it may sound, the writer's experience in working with drug dependents in Hong Kong and alcoholics in Denver, Colorado convinced him that such support cannot be organized by professional service alone. The client systems in total (individuals, families, peer groups, and the functional community) must be involved for self-help and mutual support. Therefore, using the Alcoholics Anonymous as a reference model, I encouraged and motivated a small group of fully rehabilitated ex-addicts who had successfully completed the three-year follow-up service to form an Alumni Association in 1968 to provide continued support to each other, as well as to new discharges of SARDA's programs. The name was chosen by its founding members to symbolize their bond with the rehabilitation agency whose program was considered an educational experience to them. The A.A. of Hong Kong was registered as an independent non-profit-making society and began to recruit additional members as more men and women continued to graduate from SARDA's treatment centres.<sup>(21)</sup>

In the beginning, the association depended very much on professional guidance for directions and in the absence of such an "advisor," their group meetings would sometimes bog down with rivalry for power and prestige. Gradually, an indigenous leadership was stabilized and workable structure and group norms emerged. All members are required to pass a one-year probationary period of drug- and crime-free life in the community, before qualifying for the full voting status. Membership of those who lapsed are suspended, until their drug-free status is again proven by urine tests. As membership expanded, the Association branched into six district chapters which are located at different neighborhoods of Hong Kong and Kowloon.

Annual elections are held at the chapter level and at the central board-of-directors level. To avoid excessive power concentration, their constitution stipulates that no chapter chairman shall serve more than two years and no board chairman shall serve more than three years consecutively. As self-assumed roles, they encouraged active drug users to seek treatment and lapsed members to apply for readmission. The Association also organized vocational cooperatives, which included a "sanitation and cleansing team" to serve the residents for housing projects, a "tailor shop" to make, mend, and alter dresses for A.A. members as well as SARDA staff, and a "carpenter shop" to make furniture and do interior decorations. All of these activities provide short- or mid-term employment for former patients until better jobs could be found in the open market. In the past three years, the Association has built parks for senior citizens, beautified neighborhoods with plants and flowers, and established hostels or halfway houses in different districts to offer transitory accommodation to new "graduates" who do not have a suitable home. So far, they have managed to open three hostels and kept all of them clean and drug-free. There are now approximately 1,000 members who each pay a fee of \$10 a year and enjoy all the recreational and educational facilities provided in their respective districts. The needs of affiliation and mutual emotional support are thus met, and the members are finding that the pressure of social prejudice or "injustices" is no longer so difficult to bear. More importantly, the temptation of drugs and crime are no longer so difficult to resist.

Since 1970, the A.A. has, by invitation, participated in each year's anti-narcotic campaigns organized by the government-sponsored Action Committee Against Narcotics, and on its own initiative sent out entertainment teams to various neighborhoods, institutions, and schools to present variety shows and musical programs with a theme focused on preventive education. It is gratifying to see that the Association has managed to change in 10 years not only the values of its own members from self-centredness to "reciprocal altruism" but also of the community, from that of mutual rejection and suspicion to that of acceptance and cooperation.<sup>(23)</sup> Many international visitors or observers have praised the work of A.A. and the latter's representatives have been invited to make return visits to several neighboring countries. Although the contribution of the Association toward treatment and prevention is still subject to external evaluation, it has demonstrated that the concept of self-help and "reciprocal altruism" are invaluable and warrant scientific study or trial application in other countries.

## **Conclusion**

Studying drug abuse problems around the world, I found a common cleavage between "us" and "them," whereby personal involvement with drugs usually puts the individual into a category of a mere subject of legal action, medical treatment, clinical experiment, or social care. Some professionals do not see the client as a whole person in the social context but attempt to deal with the problem in a tight compartment of their expertise. It is evident that the wider the gap between "we the professional experts" and

"they the patients/clients" the lower the rate of successful treatment and prevention. Many treatment programs do not provide adequate support or stimulate help for reintegration of their clients into the community. Some administrators still do not trust their own ex-patients to be able to play an important role in program planning and development. On the other hand, some therapeutic communities run by ex-addicts still mistrust professional advice or reject expert assistance. Sophisticated research conducted in developed countries often costs millions of dollars in resources but produces only marginal benefits, probably irrelevant to the street addict. Obviously, developing countries can benefit from technical assistance from developed countries in drug abuse programs and at the same time are in a better position to advise the latter on priorities for research and experiments, the outcome of which may affect the whole world.

No one disputes the axiom that an ounce of prevention is worth a pound of cure; yet few countries allocate adequate resources in prevention, other than law enforcement. Government officials and policy-makers tend to view treatment and prevention as entirely separate entities with nothing in common and little coordination necessary. Some highly qualified therapists in the field do not even have interest or know-how in preventive intervention. Actually prevention and treatment are inseparable, a concept essential in the fight against any "communicable disease."<sup>(24,25)</sup> In reality, primary preventive education against substance abuse, if not linked with a treatment program, may be viewed as empty propaganda. Secondary prevention implies crisis intervention and early treatment. Tertiary prevention here means follow-up care and self-help to reduce relapses into a criminal subculture or to the drug-using life style. Self and mutual-help are effective in collaborating with professional workers for preventive intervention at different levels. Their contribution in treatment and prevention will stimulate positive change in community attitudes and promote reciprocal altruism in the fight against drug abuse. National and international agencies would do well to support the organization and leadership training of self and mutual-help groups in different countries and encourage their cross-fertilization with professional bodies across national barriers. It may well provide us with a linkage needed between treatment and prevention, and help to mobilize community involvement in problem reduction.<sup>(26)</sup>

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# INTERNATIONAL COOPERATION IN DRUG ABUSE PREVENTION

by Dr. Robert L. DuPont

In September, 1977, I gave a speech in Canada about therapeutic communities. The title was, *You Alone Can Do It, But You Cannot Do It Alone*. That neat phrase from the international therapeutic communities movement also fits my theme today: each nation can deal with its own drug abuse problem, but it cannot do it alone.

There is nothing quite like the drug abuse problem to show us that we are all part of one world. Our interdependence in our problems and our interdependence in our solutions to these problems hardly need emphasis. For many years, the international community has recognized that we must work more effectively together to deal with the supply of illegal drugs. It is time to recognize that our prevention, treatment, and assessment programs are also best dealt with in global partnership. There is a great need for bilateral programs in drug abuse prevention, and there is a great need for multinational collaborative efforts. We are fortunate to have strong organizations like WHO and the United Nations Division of Narcotic Drugs to lead the way.

The Addiction Research Foundation has been a beacon of excellence in the scientific study of the problems of alcoholism and drug dependence. That beacon shines not only across Canada's southern border but around the world.

Some of the most valuable experiences I have had in my four years with the U.S. National Institute on Drug Abuse have been the contacts and exchanges I have had with individuals in many other countries and international organizations working in the field of drug abuse. I am

convinced that continued and expanded international cooperation can benefit all nations by increasing our knowledge and understanding of drug abuse.

Many countries are now recognizing that drug abuse is a serious human problem both inside and outside their national boundaries. Today many psychotropic drugs—both natural and synthetic—are readily available in most, if not all, regions of the world. One of the most malignant forms of drug abuse, heroin abuse, is now found in many areas of the world. In Europe, part of the Middle East, and Southeast Asia increases in heroin use during the last two years appear to be particularly serious. There is a global concentration of heroin use in metropolitan areas and, to a lesser extent, a spread of abuse into some rural areas. Although there are some communities in the world which still do not have substantial heroin problems, they are becoming fewer and fewer.

The main reason there is such widespread use of drugs is simple. Most drugs with psychoactive properties are what psychiatrists and psychologists call primary reinforcing substances: chemicals which produce feelings that the user enjoys. This biological effect does not depend upon one's age, sex, race, culture, or national origin. Drug abuse is not a unique characteristic of any particular segment of society, geographic region, or nation. It is a global human problem. Certainly demographic, geographic, political, and social factors influence the levels of drug abuse throughout the world. However, none of these factors completely protect against drug abuse problems. The epidemic spread of drug abuse is no longer infrequent, even in areas once thought to be safe from drug problems. Far more must be learned about the ways those complex social and economic factors do, and do not, influence drug use patterns.

In the past, the use of psychoactive drugs around the world occurred in isolated geographic and cultural islands with their own social controls—i.e. who should use them, how often, and what should be done with people who used too much. Cultural restraints on specific drug-taking behaviors can be identified in countries all over the world—from the traditional chewing of coca leaf in the Andes region of South America to the use of cannabis in India and Mexico to opium smoking in Iran and Laos. But today, the cultural constraints which characterized most cultures of the world are dramatically breaking down. The leading edge of this change has been the widespread use of cannabis. The global levels of cannabis consumption are truly remarkable. Heroin and other psychotropic drug use has shown a similar growth in many parts of the world during the last decade. In many developing countries, cultivation of plants for drugs and trafficking in both opium and cannabis go hand in hand with political instability. For example, in Lebanon the authorities are now unable to control the production and trafficking of hashish, which is exported illegally to Europe. The developing African nations are uniquely vulnerable to increased drug cultivation and trafficking. There is already indigenous cultivation and use of cannabis in East and South Africa. In 1976, there were large-scale plantings of cannabis in Nigeria

for export to Europe. There is also increasing concern about illegal cultivation of marihuana in the United States. Drug abuse has been given a high priority by President Jimmy Carter. It is not only a political issue to the President—he is personally knowledgeable and concerned about it. When Jimmy Carter became governor of Georgia in 1971, one of the first problems in which he took a personal interest was drug abuse. While he was governor, a system of drug abuse clinics was established throughout the state, not only in the capital city of Atlanta, but also in the smaller communities. Mr. Carter created a national model for statewide drug abuse services in 1971. Since then he has visited drug abuse programs all over the United States, talking personally to drug abuse workers and to drug abusers themselves.

In his recent message to the Congress on drug abuse, President Carter highlighted his concern and support for greater international cooperation on drug abuse problems. The President's special advisor on human needs, including drug abuse, is Dr. Peter Bourne, the psychiatrist who started the state drug abuse programs in Georgia in 1971. Dr. Bourne was one of the first people to grasp the important international dimensions of the drug abuse problem beyond the traditional law enforcement area. He continues to be interested in international initiatives in demand reduction to balance and complement our international efforts in law enforcement. Dr. Bourne is close to the President, working directly within the White House, and is director of the new Office of Drug Abuse Policy (ODAP). Dr. Bourne and his small but effective staff at ODAP provide a high-level focus and policy direction for the U.S. drug abuse programs in both supply and demand reduction. High-level support and leadership are essential to mobilize resources and direct effective national programs.

The agency in the U.S. government which has the responsibility and mandate for official diplomatic initiatives and foreign assistance is the State Department. The focal point in the State Department for drug abuse problems is the office of the senior advisor to the secretary and coordinator for international narcotics matters, under the able leadership of Ms. Mathea Falco, an attorney who was formerly a senior staff member of the Drug Abuse Council. This office has established close working relationships with the two program agencies concerned with supply and demand—NIDA and the Drug Enforcement Administration (DEA). The heads of these agencies, Peter Bensinger of DEA, Ms. Falco, and myself, meet on a bi-weekly basis in the White House, under the leadership of Peter Bourne, to discuss international issues and activities. In this process, we have developed an active partnership between supply and demand reduction efforts, as well as a balance between national and international efforts.

Some of the reasons for the global drug abuse epidemic can be traced to a number of social changes which are taking place throughout the world. Increased communication and travel have brought us together. This contact brings tremendous benefits, but it also brings a contagion of behavior that may explain how drug abuse can spread rapidly. Obviously, the increased travel has also involved the traffickers. They now have the ability to move



quickly large amounts of drugs over long distances.

Increased global communications have made a big impact in recent years. An event reported in a newspaper in one part of the world will be seen, experienced, and thought about by people all over the world. Drug use and drug trafficking have been big news everywhere during the last decade.

Some of the hallmarks of the modern world are increased individual responsibility, decreased traditional cultural constraints, and increased flexibility of behavior. These global cultural trends bring many benefits, but they also create serious problems. One example of this complex phenomenon comes from agriculture. Many parts of the world produce low levels of food partly because of the persistence of traditional, less effective, agricultural practices. Many governments try to change these practices so farmers will adopt new and more efficient agricultural techniques. But the same cultural barriers that have kept people from adopting new farming techniques have kept them from adopting new social behaviors such as drug taking. The same relaxation of those barriers that produces a good effect in one area, produces a negative effect in another. It is often the younger, better-educated farmer who first adopts new farming techniques, just as it is often the younger, better-educated people in both developed and less developed nations who first adopt new drug-using behaviors. This is not a criticism of any lifestyle, but it points out that these conflicts between traditional practices and modern life affect us in complex ways.

Another important global social change relates to our attitudes toward tobacco and alcohol. One of the effects of our heightened awareness of drug abuse is the recognition by many of us that alcohol and tobacco are drugs. Most of us were oblivious to the effects of these substances in our own lives and in our cultures until the drug abuse epidemic of the last decade. In the United States there is now widespread recognition that alcohol and tobacco are drugs and have the characteristics—the reinforcing properties and the negative health consequences—that we associate with illegal drugs. The difference is that these common and generally accepted drugs have already gone through the extensive process of diffusion throughout most societies. We have become accustomed to paying a staggering social price for the privilege of individual choice in the use of alcohol and tobacco. In the U.S. we pay more than \$35 billion a year for alcohol-related health problems, and nearly \$20 billion a year because of tobacco use. These costs—about 5% of the entire gross national product—are the costs of our current approach to giving each citizen the right to set his own level of alcohol and tobacco use in an environment which, in many ways, encourages use of these drugs. The illegal drugs, such as marihuana, heroin, LSD are prohibited. Illegal drugs cost about \$10 billion a year in the United States in terms of health and social costs. The costs associated with the use of illegal drugs are lower than the costs for alcohol and tobacco use. This is not because these drugs are less attractive or less harmful than alcohol or tobacco. It is because of the relative success of our combined supply and demand reduction efforts in dealing with illegal drugs such as marihuana, cocaine, and heroin.



Because of the high costs we pay as a society for the use of both legal and illegal drugs, we need to find strategies which are more effective than those we now have. From the important research carried out at the Addiction Research Foundation, the implication of the extent of consumption of alcohol on the number of casualties because of the effects of drinking is more clear. Research in this area suggests to some experts that the major realistic opportunities for setting social policy are in the prevention of further increases in the extent of alcohol consumption, thereby stabilizing the number of future casualties.

My question is: Does this principle apply in the drug abuse field? Is there a basic similarity between alcohol and other drug consumption curves in their correlation with casualty rates? And do prescription rates of psychoactive drugs and rates of the use of illicit substances, on the one hand, correlate with the number of drug abuse casualties on the other? We are interested in such questions and look forward to the continued stimulation and leadership of the ARF in clarifying these important issues. These studies help us understand the realities of developing effective social policy in the substance abuse field.

Drug abuse is not a fad. It will simply not go away, any more than alcohol and tobacco use will simply go away. Drug abuse is a characteristic of our lives and, judging from the social changes occurring throughout the world, it is going to remain a serious problem.

In addition to increased travel, faster communications, conflicting traditional and modern values, and the wide acceptance of alcohol and tobacco, important changes in the composition of our population have taken place in the last decade. These changes relate directly to drug-using patterns. A dramatic increase in the size of the youthful population took place in the United States in the decade of the 1960s. The baby boom following World War II produced in the United States, 20 years later, a sudden upsurge in the size of the adolescent population, the population most vulnerable to drug abuse. Also, the change in the size and nature of our population fostered drug abuse. While other factors involved should not be minimized, the age-related changes in our population were also necessary for the drug abuse epidemic. The rise in our youthful population helped create the drug abuse epidemic the same way kindling helps a spark spread a fire.

Similar demographic conditions now exist in many other countries. Reductions in infant mortality have increased the number of young people in the vulnerable age range in many countries, particularly in developing nations.

Perhaps of even greater concern in many nations is the massive migration of youth to cities, producing a greater concentration of young people in urban areas, even in those nations where overall age patterns have not changed substantially. Such an increase of often under-employed youth in cities raises a nation's vulnerability to drug abuse. Many drugs are readily available in most, if not all, regions of the world.

The widespread existence of heroin-user groups; the decrease in traditional cultural restraints on adopting new—and often deviant—behavior; increased affluence, travel, and communication; and the tremendous increase in the capacity of the global illegal heroin and other drug supply systems bode ill for many nations.

### **NIDA and Overseas Diplomatic Representatives**

One of the ways in which the National Institute on Drug Abuse has been working cooperatively with the State Department during the past year is by helping to inform and sensitize the U.S. embassy personnel overseas to the problems of demand reduction in their host countries. The State Department has assigned individuals in many of our embassies overseas to serve as narcotics coordinators who are responsible for focusing on the drug problems in their host countries. These narcotics coordinators, through direct contacts with government officials and experts in their host countries, can help in identifying host country drug abuse problems and areas in which an exchange of expertise or collaboration between the host country and the U.S., or between other countries in the region, could be useful and beneficial. Since many of the narcotics coordinators have focused largely on supply reduction, NIDA made an effort to increase its knowledge and understanding of the issues involved in demand reduction. In the spring of 1977 NIDA sent to each of the U.S. embassies books, publications, and documents selected to provide an overview of the health and social aspects of drug abuse and approaches to treatment and prevention. A descriptive list of additional reports and publications available from NIDA, categorized by subject area, was sent to the narcotics coordinators. These coordinators have been placed on a special international mailing list to receive new materials as they become available. In addition, at the regional meetings of the narcotics coordinators held in Bangkok, Rome, and Miami in 1977, special briefings on demand reduction were presented by representatives from NIDA and our national training centre. The institute is also preparing a resources guide for narcotics coordinators to assist them in identifying resources in the demand reduction area which are available from the U.S. government or international organizations.

NIDA also works with the State Department to provide technical assistance to priority countries which have identified needs in specific aspects of demand reduction program development. For example, a consultant who was involved in the development of registering addicts in New York City is now in Hong Kong providing technical assistance in the design and implementation of an addict registry system to meet the need of the Hong Kong government. Also, at the request of the government of Burma, NIDA is sending a treatment expert to Burma for three months to work with physicians and other health personnel in planning expanded treatment services for their increasing number of addicts. Dr. Ne Win from Burma visited a variety of treatment facilities in the United States to observe the

programs and services and to meet with key staff at NIDA and at the State Department.

In the area of training, NIDA is also cooperating actively with the State Department to provide specialized training for groups of drug abuse personnel from other countries. For example, in November, 1977, a group of nine public health specialists and nine health educators from Ecuador were to come to the United States for five weeks of training in drug abuse treatment and education program planning and development. Training was to be provided in Spanish at NIDA's regional training centre in Puerto Rico and at a bilingual treatment and education program in Orlando, Florida. Plans are also underway for training programs for groups of drug abuse treatment personnel from Bolivia and Thailand.

NIDA is also working with the State Department in the development of a series of special publications designed for international audiences. The content of the first report will be an overview of the kinds of information which the governments of countries need in order to develop national strategies and programs to respond to their particular drug abuse problems.

### **Collaboration Between NIDA and Agencies in Other Countries**

In its international activities, NIDA has also developed close working relationships with similar agencies in other countries. One of the most promising is the inter-agency collaboration between CEMEF in Mexico and NIDA. The institute is engaged in discussions with Dr. de la Fuente and other distinguished members of his staff at CEMEF to define the dimensions of a collaborative program of research and a two-way sharing of technical expertise in a number of areas, including training, program evaluation, and epidemiology.

CEMEF and ARF have been designated official World Health Organization collaborative centres. NIDA salutes its esteemed neighbors for their substantial achievements and international recognition. Perhaps it will soon be time to similarly recognize a drug abuse prevention agency in the only country which shares a border with both Mexico and Canada.

NIDA is also exploring with drug abuse officials in the government of Iran a number of areas for future collaboration, including training exchanges, possible cooperation in the clinical testing of LAAM in Iran, and cooperation with the World Psychiatric Association meeting on drug dependence which may be held in Iran. Also, NIDA has been communicating directly with government officials in Italy regarding possible collaboration and assistance in the developing of management information systems for treatment programs. The Rome conference in 1976, co-sponsored by NIDA, the government of Italy, and the International Council on Alcohol and the Addictions (ICAA), stimulated interest in further exchanges of expertise and established an important dialogue between the two countries on drug abuse demand reduction approaches.



## **Recent NIDA Initiatives in the International Area**

In the area of research, NIDA will continue its efforts to collaborate with investigators in other countries in research on the health and social aspects of drug abuse. NIDA's international initiatives in research operate through research grants and contracts to institutions for research in other countries in a few selected projects. This is accomplished by participation of NIDA staff in international conferences on research topics, by site visits and correspondence with researchers in other countries, and by provision of drugs for research purposes to investigators in other countries.

An example of an innovative research and treatment demonstration project recently funded by NIDA is the acupuncture project in Hong Kong under the able direction of Dr. H.L. Wen, who is the leading expert in the field of acupuncture. Through controlled experiments with the use of acupuncture and electrical stimulation, NIDA hopes to learn more about the nature of addiction and how it may relate to other neurological processes, as well as assessing the effectiveness of acupuncture as a treatment.

The draft of another research project, a report on the history of drug use worldwide from the 16th century to the present time, was submitted to NIDA in October, 1977. Other international research projects which are currently under review and approved for funding by NIDA include proposals for conferences on coca consumption in Latin America and a conference on opium use in Southeast Asia as seen from the anthropological perspective.

In the area of prevention, we are planning to make the resources of our Pyramid Project available to other countries who request assistance in prevention planning. Pyramid is a mechanism for providing information, resources, and technical assistance to local, state, and federal prevention programs. This approach has been effective in the United States.

Another new international initiative which NIDA is planning is in the area of training. One of our most successful training programs in the United States is our physician and allied health training program. This includes our career teacher program in which 50 career teachers developed publications and curricula on drug abuse for the purpose of physician education in medical schools. A number of other countries have expressed an interest in these programs for physician education, and NIDA would like to assist those countries in developing similar programs which are responsive to their needs.

## **Collaboration with WHO and Other International Organizations**

Over the last several years, NIDA has attempted to stimulate the development of drug abuse prevention and intervention programs in priority areas of the world. This has been done directly through bilateral programs with countries and through multilateral and international organizations. The international collaboration with the major international organizations, such as WHO, has been focused upon specific technical issues.



NIDA and the World Health Organization have informally agreed to use the WHO regional office structure to stimulate and develop more drug abuse prevention efforts at the country level. NIDA will soon begin a formal project to assist the WHO Drug Dependence Program and the regional offices in the eastern Mediterranean and southeast Asian areas to hold high-level meetings on drug abuse for country decision-makers. Although the final arrangements are subject to discussion, we anticipate that the first meetings, to be held in October, 1978 in the Middle East in collaboration with the WHO regional office for the eastern Mediterranean, may include participants from Afghanistan, Egypt, India, Iran, Lebanon, Nepal, Pakistan, Sri Lanka, Sudan, and Tunisia. The second, to be held in March, 1979 in Southeast Asia in collaboration with the WHO regional office for this area, may include participants from Burma, Hong Kong, Indonesia, Japan, Korea, Laos, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

The report resulting from the meeting will contain assessments of the drug dependence problems in each region, the facilities and programs currently available for treatment and prevention, and recommendations for future program activity and mechanisms for coordination and collaboration between countries in the region.

Another project in which NIDA and WHO plan to collaborate involves a review of epidemiological and intervention programs in rural opium-producing regions. This project will bring together the experience and knowledge of experts who have been working on problems of drug dependence epidemiology and treatment in rural opium-producing areas to review and assess the effectiveness of various approaches which have been tried.

Experts will prepare working papers and WHO consultants will review and discuss the various epidemiological and intervention approaches. A site visit will be made to one or more target communities. The major approaches will be described and evaluated in terms of their relative effectiveness, advantages, and disadvantages. Recommendations will be made for more effective policies and programs in these rural opium-producing regions.

This meeting will provide the opportunity to fill a very important gap in the treatment and rehabilitation field. High-cost, intensive, professionally-oriented approaches developed in urbanized settings of the West are often not suitable for rural areas where professionally trained manpower and medical expertise are not available. New approaches are needed, based on existing manpower which can be applied in villages where the leadership structure is receptive to programs they can operate. Reducing the consumption of and dependence on drugs in these communities is a real challenge. People in the United States, Canada, and Europe are linked to these countries which must be helped to develop low-cost social and behavioral techniques which do not require costly buildings, doctors, and equipment.

Joint projects in the drug dependence field should contribute to more

effective planning and program development at the local and national levels in several critical regions of the world.

NIDA also plans increased cooperation and collaboration with the International Council on Alcohol and the Addictions. The ICAA has sponsored many important conferences through the world. These international meetings provide a forum for a valuable exchange of ideas, knowledge, and expertise among key officials and professionals working in the field of drug abuse in many different countries. NIDA plans to assist the ICAA by identifying experts in specific areas who could provide consultation and present papers on specific topics, facilitating the exchange of information at these meetings. The institute intends to emphasize assessment, treatment, and evaluation as the basic areas in which its technical assistance program is carried out. Overall, NIDA now has approximately 23 different projects for a total of over \$1.5 million for the 1977 fiscal year. These projects cover the entire field of demand reduction.

In closing, I would like to comment on the lessons the United States has learned over the last several years. First, the elimination of drug abuse is not a realistic objective to pursue, but with a firm knowledge base, we can limit the high social cost of drug abuse for our societies by pursuing a policy of balanced efforts at both supply and demand reduction.

Second, we have learned the importance of out-patient programs in treating drug abusers and the limited usefulness of hospital and institutional care.

Third, general service programs, including integrated health care approaches, have not, in general, been responsive to the unique needs of drug abusers. Clearly, there needs to be a specific focus on drug-using behavior to get a therapeutic benefit.

Fourth and finally: We in the international field can do it, but we cannot do it alone.

## Remarks

# INTERNATIONAL COLLABORATION IN DRUG ABUSE PROGRAMS

by Dr. Donald M. Smith

Dr. Arif's paper was an excellent presentation on the role of the World Health Organization's contacts, the scientific network which is behind the institutional network of WHO. His remarks fit into the structure illustrated by the international collaborative framework for drug abuse programs (see chart).

Dr. Arif outlined four principles for WHO collaborative programs—international coordination in health programs; integration of health care and other services; manpower training; and collaboration with other WHO agencies. As Dr. Wig pointed out, the programs involved in drug abuse control in the developing countries must be integrated into primary health care programs.

The objectives of the collaborating centres include: coordination and planning for developing countries; international collaboration, both in research and training; awareness-raising so that the scientists in priority areas are familiar with what is going on elsewhere; and providing assistance to WHO in policy review and in research studies relative to the international treaties.

The question for Canada is a question of money—how much are we going to put into this? We would expect, as mentioned in Senator Davey's remarks, aid requests on a priority basis from developing countries, for programs in those countries. And we'd also expect WHO requests for fellowships to study at the Addiction Research Foundation.

Dr. DuPont stressed several points to be considered when dealing with

the problems of alcohol and other drug abuse in both developed and developing countries. He talked about lifestyle, religious-moral issues, ideological posturing, the see-saw effect of substitution, cultural contagion, and the innate conservatism in all societies which keeps abuse of drugs restricted to a minority of every society.

Mr. Ch'ien warned against the folly of transplanting treatment or research models from one country to another without considering cultural differences, economics, or capabilities.

The Alumni Association which Mr. Ch'ien talked about is an interesting idea whose applicability to other cultures is worth looking into. Again, it emphasizes the need for assessing the utility of different approaches in different cultures.

I would like to outline the framework within which international collaboration in drug abuse programs occurs.

First, at the top is the U.N. General Assembly composed of diplomats from representative governments.

Second, feeding into the U.N. General Assembly are the second and the fifth committees. The second committee deals with social matters; the fifth deals with budget.

Third, feeding in through the social committee is ECOSOC, the Economic and Social Council of the United Nations. A sub-body of ECOSOC is the United Nations Commission on Narcotic Drugs which is the key organization in narcotics work. It receives reports from the International Narcotics Control Board which is responsible for looking at the international treaties on drugs (e.g. the Single Convention). The U.N. Commission also looks at the U.N. Division of Narcotic Drugs and how it works.

As well, there is the U.N. Fund for Drug Abuse Control which takes advice from the U.N. Division of Narcotic Drugs on how to distribute the money received from representative governments.

The World Health Organization is also a key body in the field of drug dependence, particularly in providing technical advice. WHO gets its instructions from the World Health Assembly which is comprised of the representative governments. Linked with WHO are the collaborative centres and expert committees.

WHO also gives technical advice to the U.N. Commission and for the action of governments. There is a coordinating committee in the U.N., the ACC (Administrative Coordinating Committee) which has sub-committee dealing with drugs. The U.N. Fund for Drug Abuse Control gives money for pilot projects to UNESCO and to WHO for health-related projects.

Governments needing assistance get direct financial aid or projects are carried out, operated by the U.N. Division of Narcotic Drugs on, for example, drug enforcement. WHO assists governments both with dollars

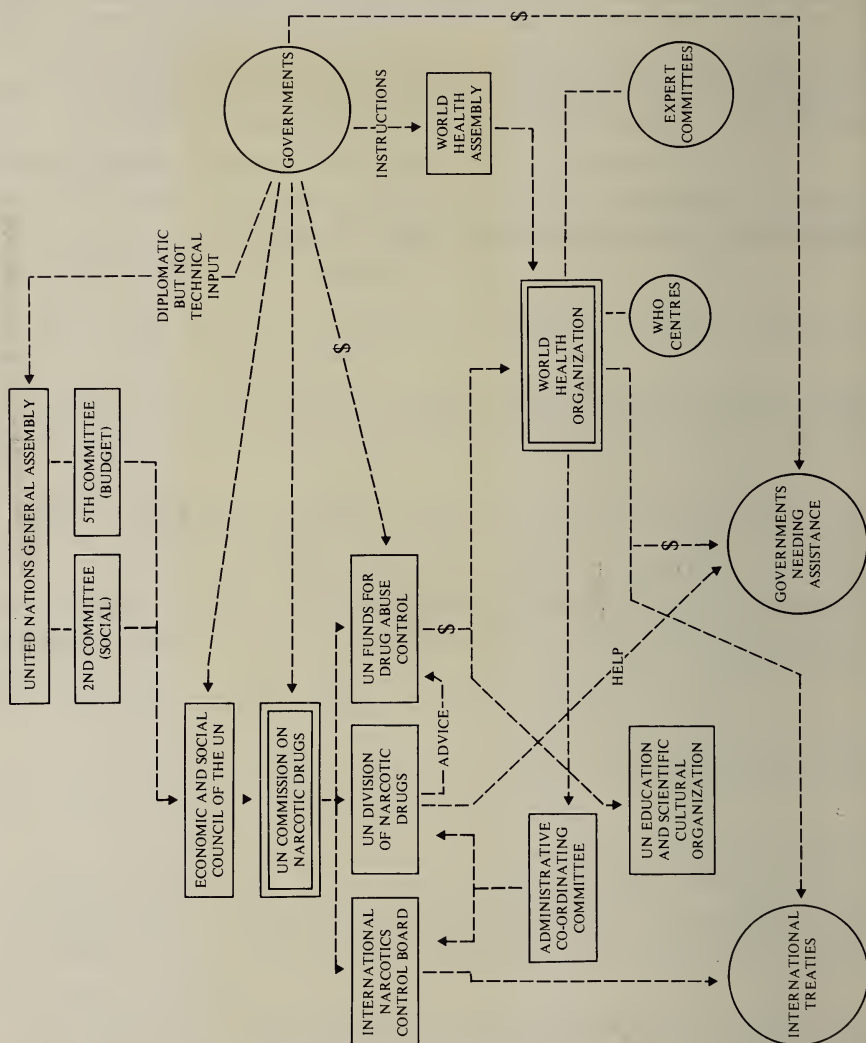


and manpower for treatment projects. There is also bilateral assistance from governments to governments needing assistance in the field of drug abuse programs.

The WHO collaborating centres obviously are important because they provide linkages back into the scientific network behind this whole bureaucratic system. It is the scientific network—scientists exchanging ideas, publishing papers, etc.—which is the real world forum, the real network in the real world. There will be linkages through the centres, there will be linkages through WHO, and through more particularly the expert committees because they know what is going on in the scientific world and are therefore able to give advice about the international treaties.

It is a complex structure, but it really works out rather simply because it amounts to cooperation between everybody concerned in this field. And cooperation has been exceptionally good over the years.

# INTERNATIONAL COLLABORATIVE FRAMEWORK FOR DRUG ABUSE PROGRAMS



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